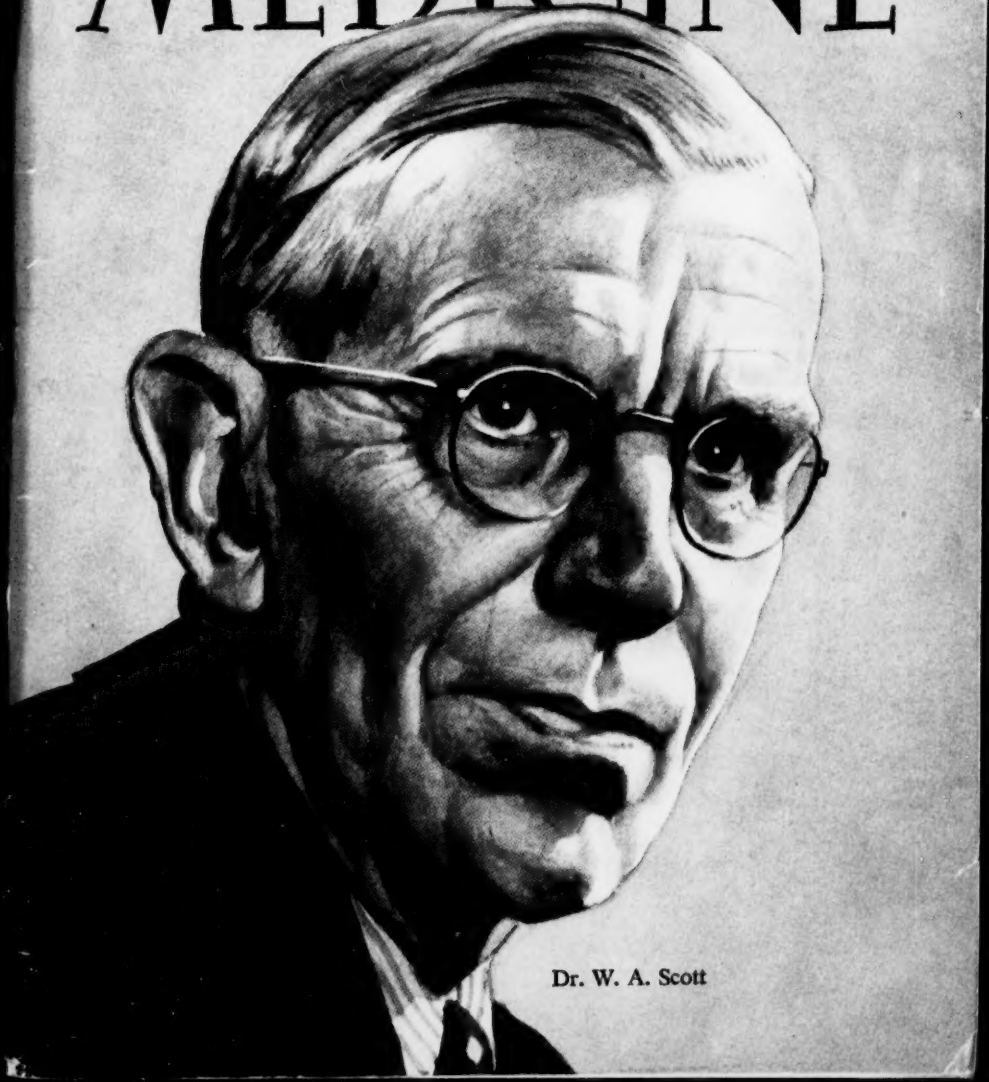
JULY 1, 1953

# MODERN MEDICINE

*The Journal of Diagnosis and Treatment*



Dr. W. A. Scott

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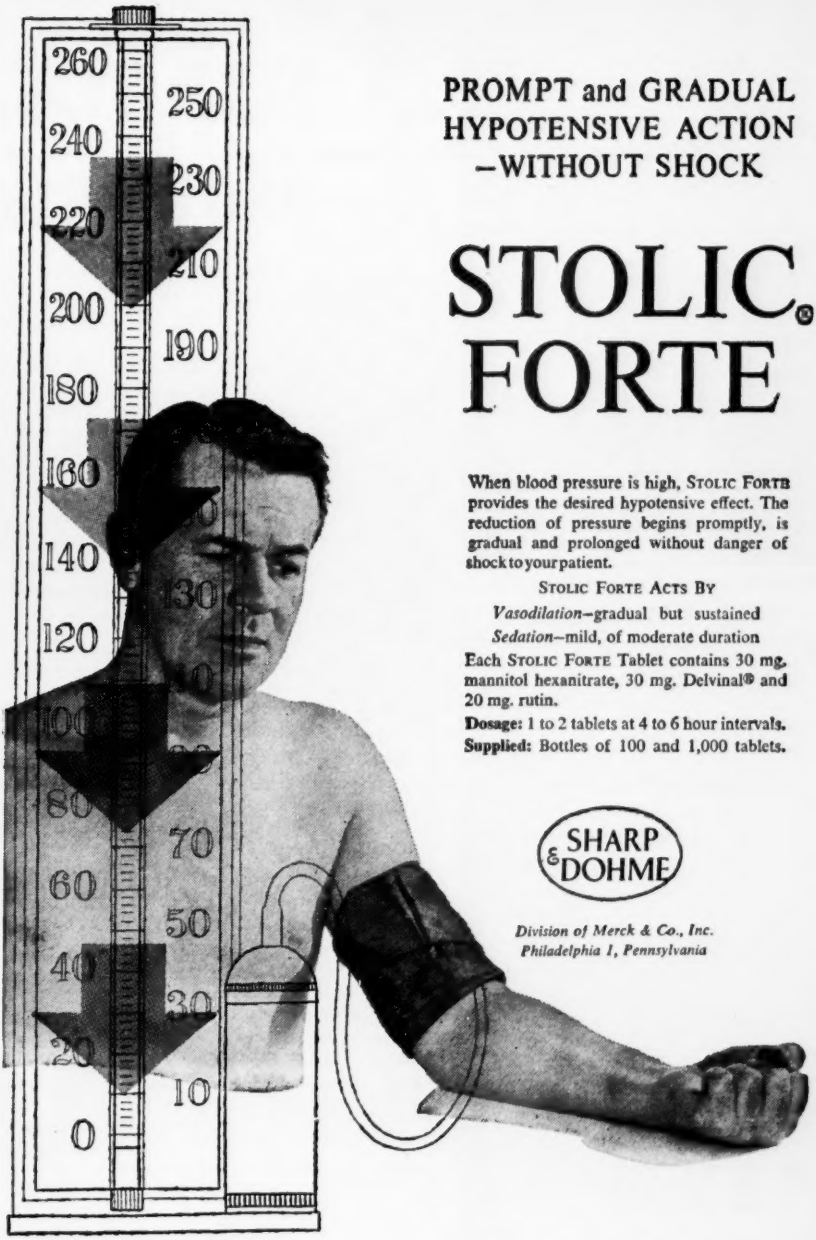


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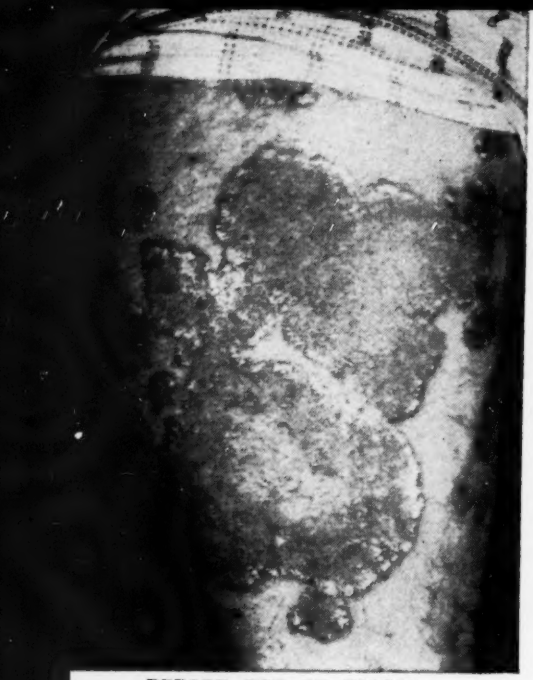

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Those beautiful legs were once covered with the ugly, scaly patches of psoriasis. At that time she refused to wear a bathing suit.

In an average of 8 weeks **RIASOL** cleared the cutaneous lesions of psoriasis in a clinical test by a group of well-known New York physicians. Successful results followed in 76% of psoriasis patients treated with **RIASOL.** Remissions were greatly reduced.

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RIASOL FOR PSORIASIS

# MODERN MEDICINE

THE JOURNAL OF DIAGNOSIS AND TREATMENT





MODERN MEDICINE, The Journal of Medical Progress, of Minneapolis, Minn., is published twice monthly on the first and fifteenth of each month, at 55 East 10th Street, St. Paul 2, Minn. Subscription rate: $10.00 a year, 50c a copy.

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# MODERN MEDICINE

THE JOURNAL OF DIAGNOSIS AND TREATMENT

# Progressing Research Reveals

## *Nutritional and Metabolic Advantages from Oranges Eaten Whole*

THAT the properly organized diet plays an essential role in health maintenance, today is universally accepted as a fundamental concept in nutrition. On this basis, oranges—properly peeled and eaten whole—merit a prominent place in the daily diet.

Orange juice is and remains probably the simplest palatable form in which to ingest the daily quota of vitamin C. *But of many other nutrients and physiologically valuable substances the fruit eaten whole supplies notably more than does the juice.*

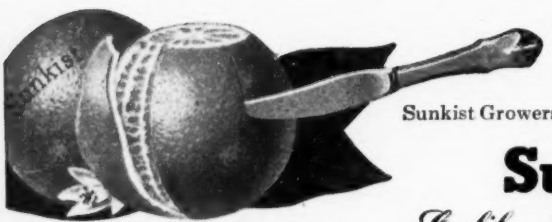
Of the carotenes, for instance, the whole fruit provides six times as much as does the juice—1.0 mg. instead of 0.16 mg. per 100 Gm. of fresh weight.

Of the protopectins, with their regulatory influence on intestinal function and improved absorption of certain noncaloric nutrients, the whole fruit contains ten times as much as does the juice—1.0 Gm. instead of 0.1 Gm. per 100 Gm.

Similarly with the bioflavonoids (which may well be concerned with capillary integrity); of these too the whole fruit contains ten times as much as does the juice—1.0 Gm. vs. 0.1 Gm.—and of inositol, one of the lipotropic B vitamins, it contains twice as much—0.4 Gm. as against 0.2 Gm. per 100 Gm. of fresh weight.

On the basis that the foods eaten should be chosen for their contribution to health maintenance, the suggestion "Eat an Orange a Day—and Eat It Whole" appears to be sound advice.

California Valencia Oranges are now in plentiful supply. Virtually everybody can benefit from their health-maintaining values.




*A practical, healthful source of protopectins*

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**Sunkist**®

*California-Arizona Oranges*

*Note air bubbles rising in bottle as patented twin valves relieve vacuum.*

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(r) nipple down for storage

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Evenflo's patented self-regulating Twin Air Valve Nipples permit milk to flow *evenly* as baby nurses. Soft, pliable Evenflo Nipple nurses by compression as well as suction. This colic-free precision nursing enables babies to finish their Evenflo bottles easily and make good gains in weight.

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*for*
*July 1*
*1953*

**Modern Medicine**
Vol. 21, No. 13

THE MAN ON THE COVER is Dr. William A. Scott, Emeritus Professor of Obstetrics and Gynecology at the University of Toronto. Chief of Service at Toronto General Hospital since 1935, Dr. Scott is a member of the Advisory Committee of Maternity Welfare of the Dominion of Canada. Dr. Scott is a fellow and member of several medical organizations, including the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons and the Royal College of Obstetricians and Gynecologists. A report based on a recent contribution to *Postgraduate Medicine*, "Bleeding in Pregnancy and Post Partum," appears on page 77.

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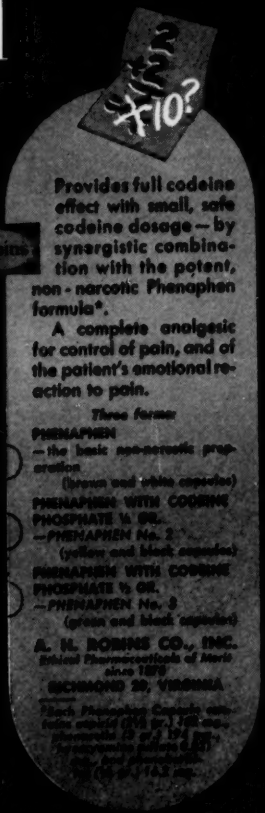


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Business Manager: M. E. Herz.

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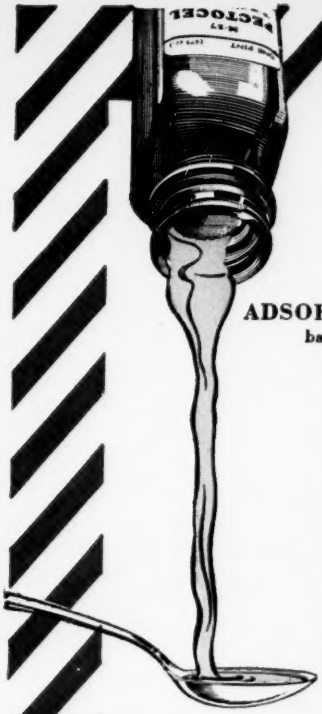

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*Dosage:* **Acute Diarrhea:** *2 to 4 tablespoonfuls every hour or two for three or four doses; then 2 tablespoonfuls every three or four hours.*
**Chronic Diarrhea:** *1 or 2 tablespoonfuls every three or four hours.*
**Children:** *In proportion to age and severity of the condition.*

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*are for*
*the slender . . .*
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Each 'Melozets' wafer contains 1.5 Gm. of methylcellulose, and is equivalent to approximately 30 calories. One or two 'Melozets' followed by a full glass of liquid may be taken between meals or one-half hour before meals. Not more than 8 'Melozets' should be taken in a 24-hour period. 'Melozets' are available from pharmacists in half-pound boxes of about 25 wafers.


**42 different 'Melozets' reducing menus on a handy diet sheet**—a note on your prescription blank will bring a pad of diet sheets and a sample of 'Melozets.' Address: Professional Service Dept., Sharp & Dohme, West Point, Pa.

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# LETTER FROM THE EDITORS

*Dear Reader:*

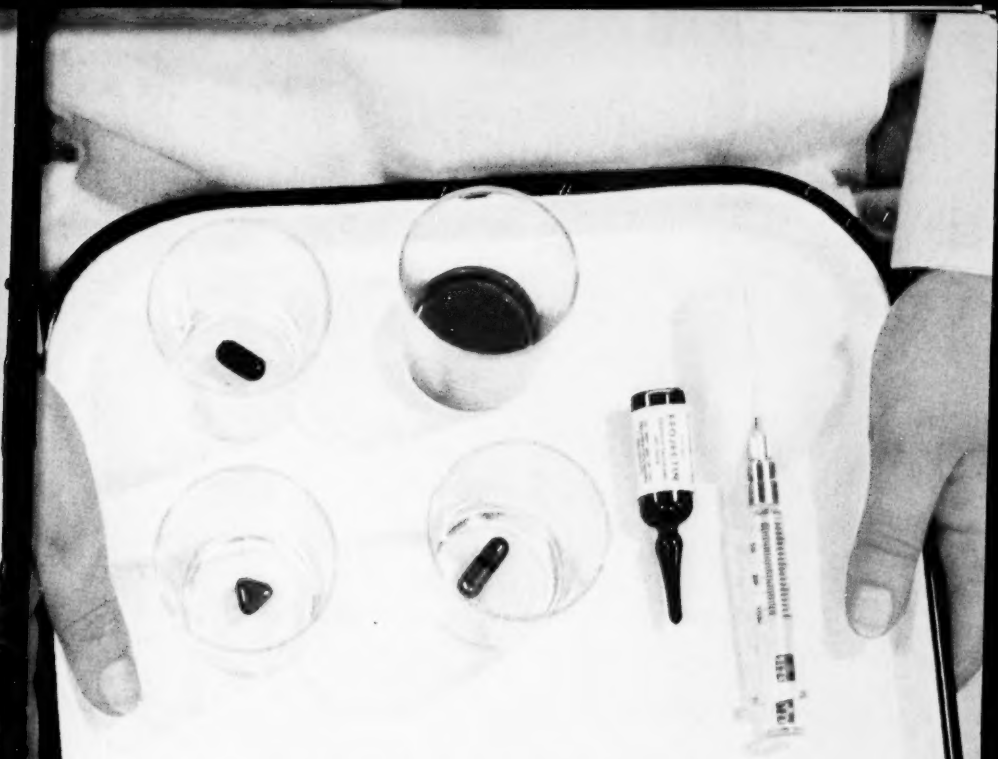
July is the season, the book publishers tell us, when a run on science fiction can be confidently expected and when bookshops all across the country put up placards suggesting appropriate titles for light summer browsing or "hammock reading."

We would like to think of *Modern Medicine* readers relaxing with other Americans in such interplanetary atmospheres, or at least in a cool breeze across the backyard. And we would like to plan a Fourth of July issue with only light matters in mind—nothing that couldn't be fanned off with a palm leaf or downed with a julep.

But, unfortunately, there is no Independence Day escape for the physician. The newspaper pollsters have already tabulated the probable count of holiday and motor casualties. The doctor knows only too well that it won't be spaceship victims he'll be hurrying to attend at County Road X and Highway 90 on the afternoon of the Fourth. The days of the giant firecracker may be gone, but the physician's task remains undiminished as long as vacationists throng the roads and beaches.

So, in planning this number of *Modern Medicine*, the editors have included some seasonal problems. Burns take second place to a longer discussion of jaw fractures, a common disaster of the motoring vacationist. Even the sun comes in for a share of study—for many a patient will be seen whose only holiday transgression was taking his place there a little too long. In selecting these articles for special emphasis we have tried not to neglect a rounded coverage of other timeless subjects. We hope you will find much of interest in this issue and much that will save you time, so that you too can finally set off on a well-earned vacation.

*The Editors*



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The most *positive* treatments
for the most common deficiencies

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# the psychological value of a good tonic

The benefit of a good tonic is not entirely limited to its tone-restoring and appetite-stimulating effects.

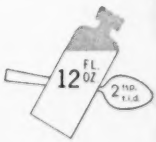
Most physicians know how much the little ceremony of taking each pre-meal dose of 'Eskay's Neuro Phosphates' or 'Eskay's Theranates' can brighten "the endless, daily, dull routine" of the elderly patient's life.

And—of great importance—"his tonic" is an ever-present symbol of the reassuring and comforting fact that he is "in the care of his physician".

*Smith, Kline & French Laboratories, Philadelphia*

## Eskay's Neuro Phosphates*

*a palatable, restorative tonic*




## Eskay's Theranates*

*the formula of famous 'Neuro Phosphates' plus Vitamin $B_1$*

**Prescribed so widely because they work so well**

*T.M. Reg. U.S. Pat. Off.

The Journal of the American Dietetic Association, October, 1951, (1) published important findings that emphasized the superiority of reconstituted MINUTE MAID Fresh-Frozen Orange Juice over home-squeezed juice of the same type oranges, in three respects:

(1) *Average levels of ascorbic acid significantly higher:* Obviously, this advantage of MINUTE MAID, observed in samples tested, is susceptible to variation, from season to season, as crops differ. It should be emphasized, however, that, penny for penny and year after year, the lower-priced MINUTE MAID offers *more* ascorbic acid than home-squeezed orange juice.

(2) *Peel oil content significantly lower:* Samples of orange juice, home-squeezed by typical housewives, showed that contents of peel oil, a cause of allergic response and poor tolerance, especially in infants, (2) were up to 700% higher than in MINUTE MAID!

(3) *Bacterial counts dramatically lower:* Bacterial counts were found to be as high as 350,000 per ml. in home-squeezed juice, but were uniformly low in MINUTE MAID.

Since publication of the above, more and more physicians are recommending MINUTE MAID in place of home-squeezed orange juice. And now comes more evidence in favor of MINUTE MAID . . .

# New Assays Reaffirm Dietary Advantages of Minute Maid Fresh-Frozen Orange Juice on a Cost Basis

The Journal of the American Dietetic Association, November, 1952, (3) carries a second report comparing MINUTE MAID Fresh-Frozen Orange Juice and home-squeezed juice of the same type oranges. In this latest study, each sample was analyzed separately:

TABLE: *Mean Values in Samples Tested*

| COMPONENT | UNITS | MINUTE MAID FRESH-FROZEN ORANGE JUICE | HOME-SQUEEZED ORANGE JUICE |
|---|---|---|---|
| Betaine | mg./100 ml. | 49 | 46 |
| Biotin | mcg./100 ml. | 0.26 | 0.26 |
| Choline | mg./100 ml. | 12 | 12 |
| Cobalt | mcg./100 ml. | 74 | 67 |
| Folic acid | mcg./100 ml. | 2.2 | 2.2 |
| Iodine | mcg./100 ml. | 0.24 | 0.21 |
| Manganese | mcg./100 ml. | 33 | 18 |
| Nitrogen | | | |
| Total | mg./100 ml. | 104 | 79 |
| Amino | mg./100 ml. | 22 | 22 |
| Volatile | mg./100 ml. | 8 | 7 |
| Non-volatile | mg./100 ml. | 96 | 72 |
| Pantothenic acid | mcg./100 ml. | 146 | 145 |
| Para-amino-benzoic acid | mcg./100 ml. | 4 | 4 |
| Phosphorus | mg./100 ml. | 19 | 18 |
| Potassium | mg./100 ml. | 386 | 290 |
| Riboflavin | mcg./100 ml. | 18 | 17 |
| Tocopherols | mg./100 ml. | 107 | 104 |
| Vitamin A | mcg./100 ml. | 19 | 16 |
| Thiamine | mcg./100 ml. | 87 | 83 |
| Vitamin $B_{12}$ | mcg./100 ml. | 0.0022 | 0.0012 |

Although the results are again susceptible to variation according to crop and year, Fresh-Frozen MINUTE MAID was equal to the home-squeezed juice in the samples tested for the largest number of components listed; and in the mean values for iodine, manganese, potassium, Vitamin A (4) and Vitamin $B_{12}$, MINUTE MAID showed appreciably *higher* values.

## SUMMARY

These new findings help enlarge professional knowledge of the nutrient constituents of orange juice in general and add fresh evidence that, on a cost basis, MINUTE MAID Fresh-Frozen Orange Juice offers not only *more* Vitamin C, but also *more* of all the other vitamins and minerals listed.

Taken in conjunction with the previously published findings, this should confirm the choice of physicians who recommend MINUTE MAID in place of home-squeezed orange juice.

REFERENCES:

(1) Rakieten, M. L., *et al.*, Journal of the American Dietetic Association, October, 1951.

(2) Joslin, C. L., and Bradley, J. E., Journal of Pediatrics, Vol. 39, No. 3, pp. 325-329 (1951).

(3) Rakieten, M. L., *et al.*, Journal of the American Dietetic Association, November, 1952.

(4) Assn. Off. Agric. Chemists: Methods of Analysis, 7th ed. Wash.: Assn. Off. Agric. Chemists, 1950.

**Reference #3 still available in reprint form.**

**MINUTE MAID CORPORATION**

**488 MADISON AVENUE, NEW YORK 22, NEW YORK**

**Wallace R. Roy, Ph.D., Director of Research**

# Correspondence

*Communications from the readers of* MODERN MEDICINE *are always welcome. Address communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

## Vigorous Measures Used

TO THE EDITORS: The report "Ferrous Sulfate Poisoning" *(Modern Medicine,* Apr. 15, 1953, p. 113) brings this danger to the attention of many physicians who may not have read the original article in *Pediatrics.*

However, the statement that no further treatment was given to a patient after gastric lavage is incorrect. Intravenous fluids, then plasma and blood by the "push" method, as well as oxygen, external warmth, and suction, were used in the treatment of shock upon admission to the hospital three and a half hours after ingestion of the tablets.

That these vigorous measures failed should reemphasize that "prevention of poisoning is paramount in therapy."

LE ROY K. BRANCH, M.D.
Key West, Fla.

## Impressive Layout

TO THE EDITORS: On behalf of the officers and staff of the American Heart Association I want to express our appreciation for the fine job which was done on "A Statement on Rheumatic Fever" *(Modern Medicine,* Apr. 15, 1953, p. 84). The layout was impressive and attractive. By printing this statement in *Modern Medicine* you have given it nation-wide distribution through a vehicle which has developed into one of the most read publications among physicians.

FREDERICK J. LEWY, M.D.
New York City

## Timely Warning

TO THE EDITORS: In regard to the article of Dr. John H. Childrey on the use of sodium psylliate for nasal allergy *(Modern Medicine,* Apr. 15, 1953, p. 124), a timely warning seems in order concerning the injection of sclerosing solutions into the septal mucosa. Tissue necrosis with resultant perforations can and does follow this procedure. Many allergic patients have had submucous resections, and injections in such instances would be particularly hazardous.

Injection of hypertrophic or turgescent turbinates, particularly the inferior ones, with sclerosing solutions is an old procedure. Bipolar submucosal electrocoagulation of the turbinate erectile tissue is probably more frequently performed.

A large percentage of these cases

*(Continued on page 22)*

a suitable choice for lipotropic therapy in

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**ATHEROSCLEROSIS • DIABETES**

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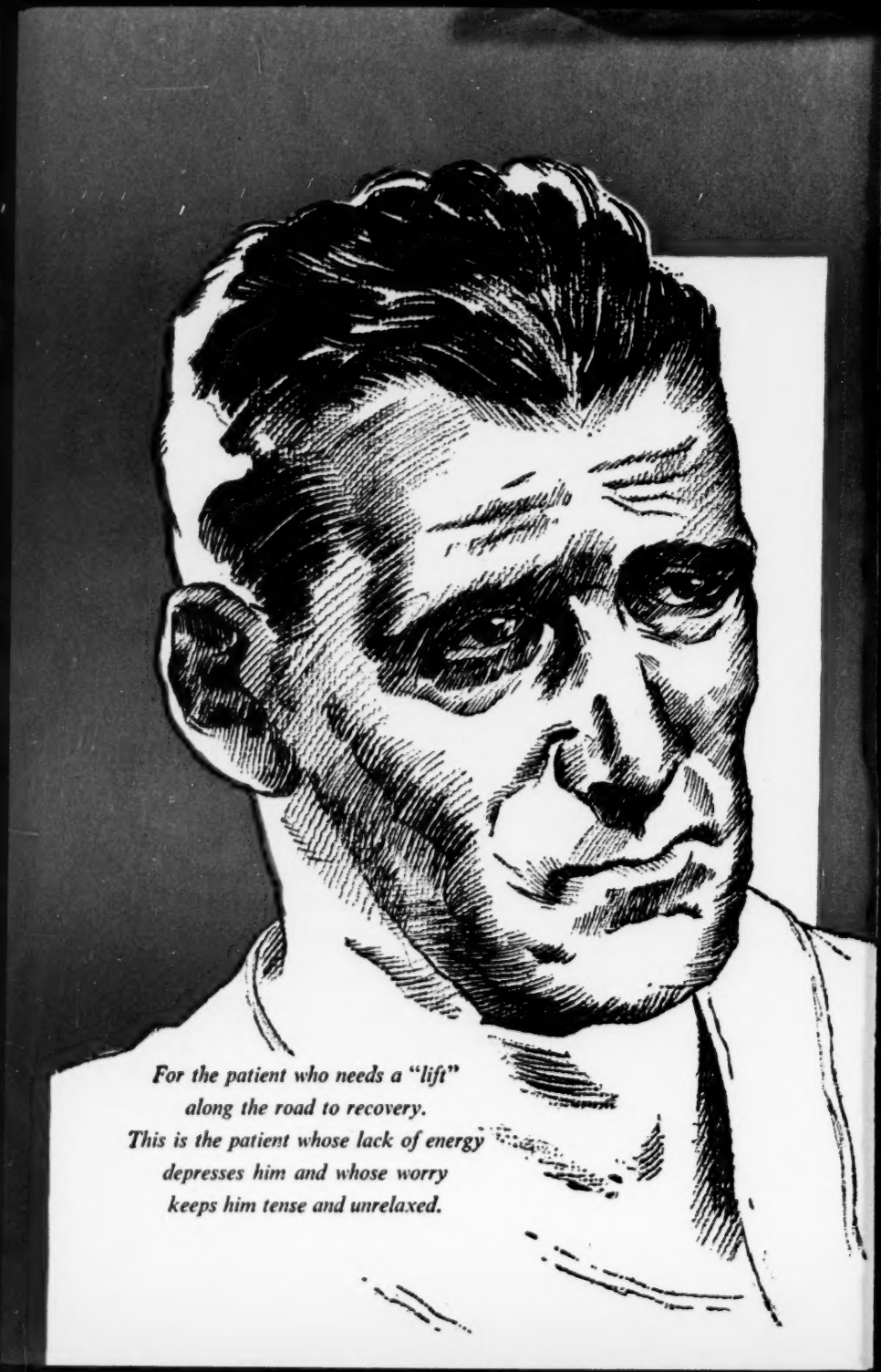

*For the patient who needs a "lift"*
*along the road to recovery.*
*This is the patient whose lack of energy*
*depresses him and whose worry*
*keeps him tense and unrelaxed.*

# the "convalescent blues"

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present "mulberry" polypoid hypertrophies of the posterior tips of the inferior turbinates that block the posterior choanae. Unless properly dealt with, no amount of aeration of the anterior nares will provide the ventilation of the nose needed for the patient's comfort.

LEO SCHWARTZ, M.D.
New York City

## Postcholecystectomy Pain

TO THE EDITORS: In answer to the Medical Forum question on the usual causes for symptoms persistent after cholecystectomy (*Modern Medicine*, Apr. 15, 1953, p. 157), Dr. Carl O. Rice replies that many patients are operated on for a diseased gallbladder under an improper diagnosis. This reasoning could apply to other surgical operations which do not give the expected results.

In the same issue Dr. John M. McGowan explains that pain after cholecystectomy may be due to spasm of the duodenum causing pancreatic duct obstruction. In other words, the persistent symptoms of pain are due to poor drainage of the ducts. In order to get perfect results in the removal of the gallbladder he advises prolonged drainage of the common bile duct.

However, Dr. McGowan concludes that in some cases the neuropsychiatrist should be called in to help find the cause of persistent discomfort or pain. Isn't it a fact that when the internist, surgeon, or specialist cannot explain a diagnosis to suit his way of thinking it is always concluded that it must be a neurologic problem?

Often we hear such diagnoses as

*(Continued on page 26)*

# new!

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- *Inflammation from Body Fluids*
- *Lesions Irritated by Scratching*
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**Milk prices cited from U. S. Bureau of Labor Statistics Bulletins.*

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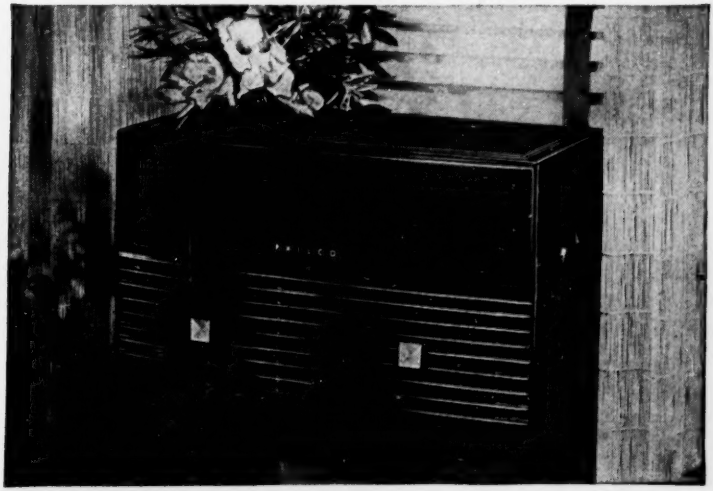

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irritable or spastic colon or nervous indigestion coming from highly reputable clinics of national fame. Are these conditions disease entities or symptoms?

WILLIAM FRANKMAN, M.D.
Wollaston, Mass.

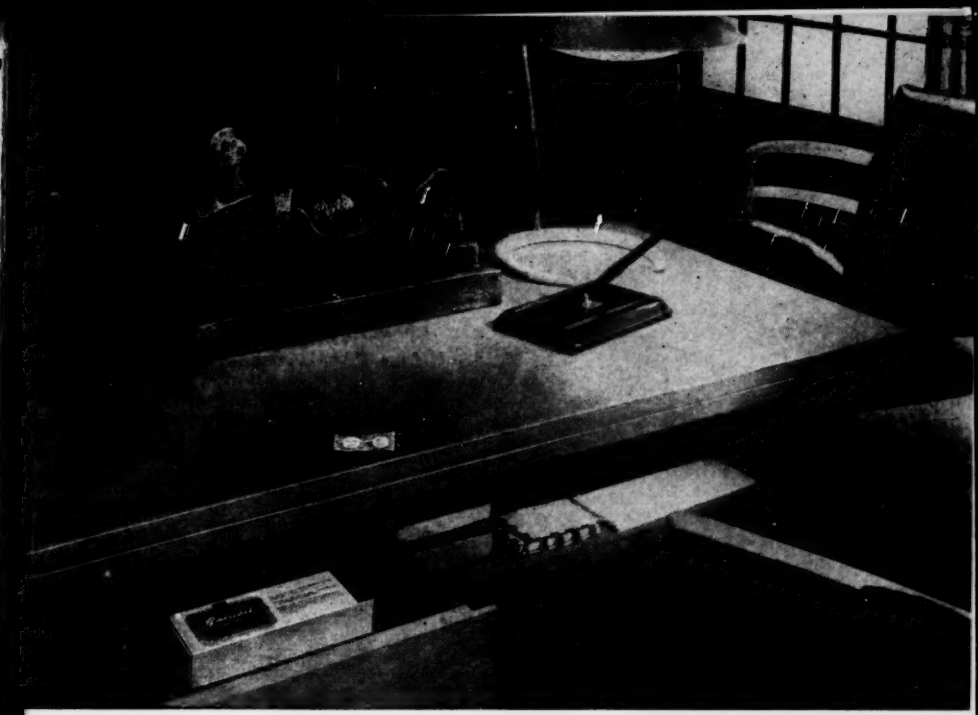
## Cirrhosis and Alcohol

TO THE EDITORS: In reply to Dr. Louis Keating regarding causal relation of alcoholism and liver cirrhosis *(Modern Medicine,* May 15, 1953, p. 17), it is generally agreed that cirrhosis of the liver is a deficiency disease, in the sense that errors in nutrition lay the groundwork.

Lesions of the liver develop most readily among persons who do not eat as they drink. This practice is common among heavy drinkers. Alcohol per se is no more toxic to the liver than sugar. The deleterious effects of both result from an increased need for lipotropic agents in the diet. In a series of 210 cases of liver cirrhosis reported in 1940, by Drs. R. S. Boles and R. S. Crew, 68 patients, or 32.4%, had an alcoholic history. It was observed that cirrhosis of the liver occurs a decade earlier in alcoholic individuals than in nonalcoholic.

Thus not all alcoholics develop cirrhosis and not all cirrhosis of the liver occurs in alcoholics.

HARRY W. ROTHMAN, M.D.
New York City



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THE PERSONAL ANTACID OF MANY PHYSICIANS BY PERSONAL PREFERENCE

NOW—AN ENEMA THAT'S

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FOR EVERY PATIENT •

*(even in heart cases)*

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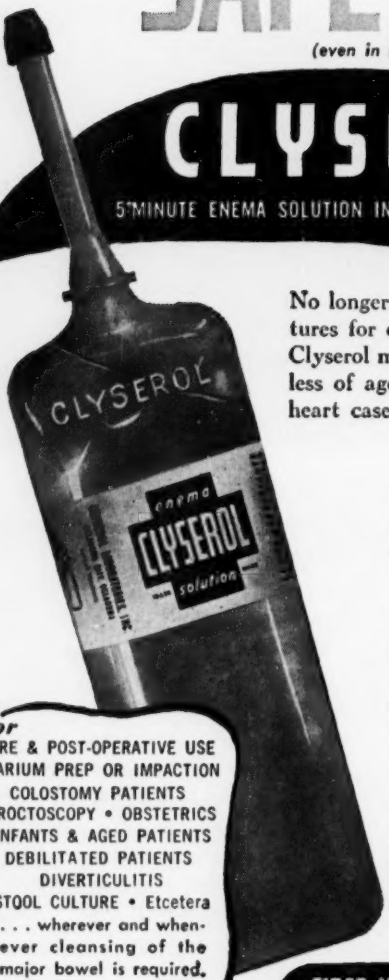
5-MINUTE ENEMA SOLUTION IN A DISPOSABLE PLASTIC CONTAINER

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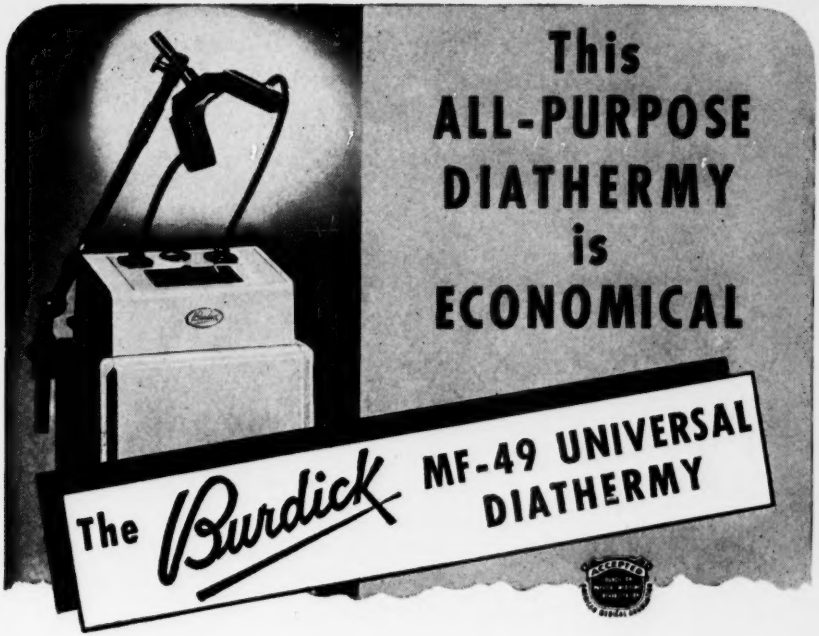


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[1]*Smith, D. T.: Disturbance of Normal Bacterial Ecology by Administration of Antibiotics with Development of New Clinical Syndromes, Annals Int. Med., 37:1123, (Dec.) 1952.*

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# Forensic Medicine

ARTHUR L. H. STREET, LL.B.

*Prepared especially for Modern Medicine*

**PROBLEM:** In a murder trial, could expert medical testimony as to cause of death be impeached by a death certificate made by the coroner?

**COURT'S ANSWER:** No.

The Nebraska Supreme Court added that the certificate was not admissible because the coroner did not give testimony conflicting with his certificate (57 N. W. 2d 761).

**PROBLEM:** On a question whether double indemnity life insurance benefits were payable on a theory of accidental death, the evidence at a trial showed that death resulted from the rupture of veins in the lower esophagus when insured attempted to push a car stuck in snow. The insured had cirrhosis of the liver, and physicians for the insurance company testified that the disease tends to produce varicose veins in the esophagus which are apt to rupture on violent exertion. But there was no autopsy showing as to whether or not insured had weakened or normal veins. Did this expert testimony preclude a jury finding that there was a fatal accidental injury?

**COURT'S ANSWER:** No.

Upholding verdict for plaintiff, the Oklahoma Supreme Court pointed out that although the medical experts testified that, ordinarily, such exertion as insured had indulged in would not have ruptured the veins if they were in normal condition, there was no proof, as distinguished from the doctors' conjecture, that the veins were not in normal condition (251 Pac. 2d 1058).

**PROBLEM:** A surgeon administered an anesthetic to a patient on a hospital operating table and left the room to sterilize his hands preparatory to operating. Without instructions from the doctor, a hospital nurse attempted to place the patient's legs in stirrups attached to the table. As a result, the patient slipped to the floor and was injured. In a suit against the hospital and nurses for damages, was it a question of fact for the jury to decide, and not a question of law for the trial judge, whether the nurse was, at the time of the accident, the surgeon's employee, and not the hospital's employee, although she was in its general employment?

**COURT'S ANSWER:** Yes.

The opinion of the Oklahoma Supreme Court in this case shows that in suits on account of accidents caused by nurses in operating, the question of liability as between surgeon and hospital depends on the particular facts as to who was in control. But the court said that "it is a matter of common knowledge that the preparation of the patient for surgery . . . is usually done by the hospital's nursing staff and the charges therefore are a part of the hospital fees, and not the surgeon's fee" (253 Pac. 2d 830).

When
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gesic ... less likely to
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From
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"A striking characteristic is its ability to produce cheerfulness in pain-depressed patients the morning after an evening dose."*

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*Glazebrook, A.J., Brit. M.J., 2:1328, Dec. 20, 1952

**PROBLEM:** A doctor's probationary privilege of performing major surgery in an association hospital, of which he was a member, was revoked. Was right to a court decree requiring that such privilege be extended him established because a city contributed 1% of the association's income from tax revenues and the county paid for care of indigent patients? Did membership in the association and his qualifications, indicated by membership in medical societies and his performance of major surgery, aid in establishing such a right?

**COURT'S ANSWER:** No.

The decision in this case, rendered April 10, 1953, by the Florida Supreme Court, involves a comprehensive review of what many other appellate courts have decided in similar cases: A nonprofit hospital operated by a voluntary association does not become a public institution because it receives voluntary contributions from public or private agencies.

However, the court's stress upon the facts that the city contributed but 1% of the hospital's revenue and that the county paid for services rendered indigent persons for whose care the county was responsible suggests that public contributions of tax revenues to a hospital might be so great as to require it to be classified as a quasi-public institution. But the opinion does say: "A private hospital may be supported by appropriations by the State, the county or a municipality without becoming a public hospi-

tal," citing decisions of the Courts of Appeals of Maryland and Kentucky.

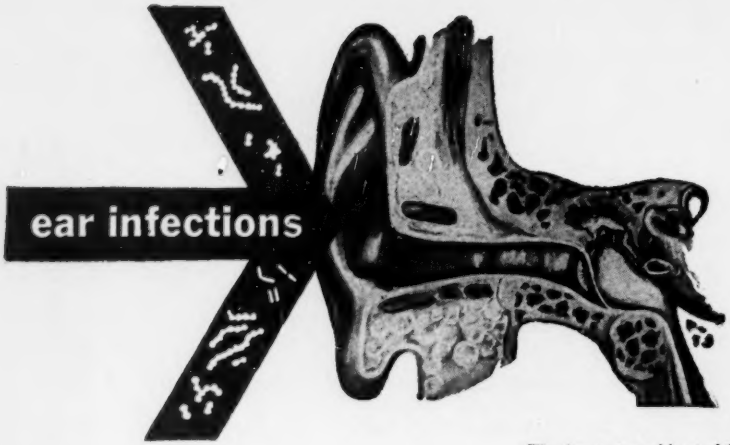
There being no statutes to the contrary, a private hospital corporation has the same right to establish rules for management of its property as has any other private corporation. Significantly, the Florida statutes do not say who may or may not practice in a private hospital.

Previous court decisions uniformly establish the right of the managing authorities of a private hospital to exercise "sound discretion" in the exclusion of physicians, in spite of the fact that these physicians may be licensed (64 So. 2d 293).

**PROBLEMS:** [1] Was a doctor's license revocable for illegally dispensing narcotics, despite his previous excellent social and professional standing? [2] Was he entitled, in the revocation proceedings, to a determination whether or not he had acted in good faith and according to fair medical standards, when he had furnished narcotics to known addicts without examinations?

**COURT'S ANSWERS:** [1] Yes. [2] No.

The California Court of Appeal, First District, also decided that illegal dispensation of narcotics by a physician includes both prescription and distribution and that, although the doctor had been acquitted of a criminal charge on disagreement by a jury, the same evidence could be considered in the proceeding to revoke his license (239 Pac. 2d 78).

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Bactericidal
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Optimum pH
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*Available in 10 cc. dropper bottles*

*References:* 1. Selvin, S. B. and Lewis, M. L.: External Otitis with Additional Studies on the Genus Pseudomonas. J. Bact. *51*:495, 1946.
2. Hayes, M. B. and Hall, C. F.: The Management of Otogenic Infection, Tr. Am. Acad. Ophth. *51*:149, 1947.
3. Senturia, B. H.: Diffuse External Otitis: Its Pathology and Treatment, Tr. Am. Acad. Ophth. *54*:147,1950.

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permeates the hard, stubborn stool of chronic constipation with millions of microscopic oil droplets, each encased in a film of Irish moss... makes it more movable

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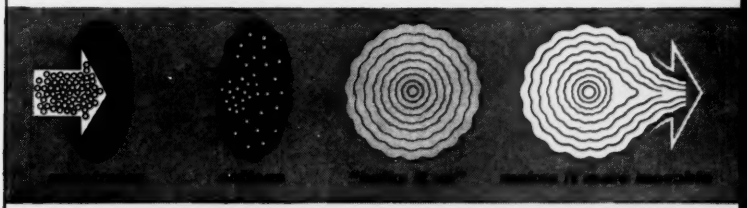

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Evidence is accumulating that mild iodine deficiency and hypothyroidism may produce cumulative harm in contributing to *hypercholesterolemia*, *myocardial damage* and *mental regression*. Judicious use of IODINE may well prove to be an important preventive and corrective measure after the 40th year.

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Crampton, C. W., The Merck Report, 57:26 (1948)
Kimble, S. T., and Steiglitz, E. J., Geriatric 7:20 (1952)

# Questions & Answers

*All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department,* MODERN MEDICINE, *84 South Tenth Street, Minneapolis 3, Minnesota.*

---

**QUESTION:** How can frozen syringes be loosened?

M.D., Illinois

ANSWER: *By Consultant in Laboratory Technic.* If the plunger sticks, the easiest technic for loosening is to boil the syringe in 25% aqueous solution of glycerin for ten minutes and attempt removal while the syringe is still hot. Clotted blood is leached out by soaking the syringe in Haemosol solution.

The most successful method is to use a syringe opener. The opener is filled with warm water and attached securely to the frozen syringe. Firm, steady pressure is applied to force water to infiltrate between the plunger and the barrel and release the plunger.

**QUESTION:** I have a 50-year-old patient who, I believe, is prematurely sexually impotent. This condition has existed twelve to eighteen months, becoming more pronounced in the last three to six months. Physical examination, review of systems, basal metabolism, and laboratory work are all within normal limits. I think the difficulty is functional. What treatment can you suggest?

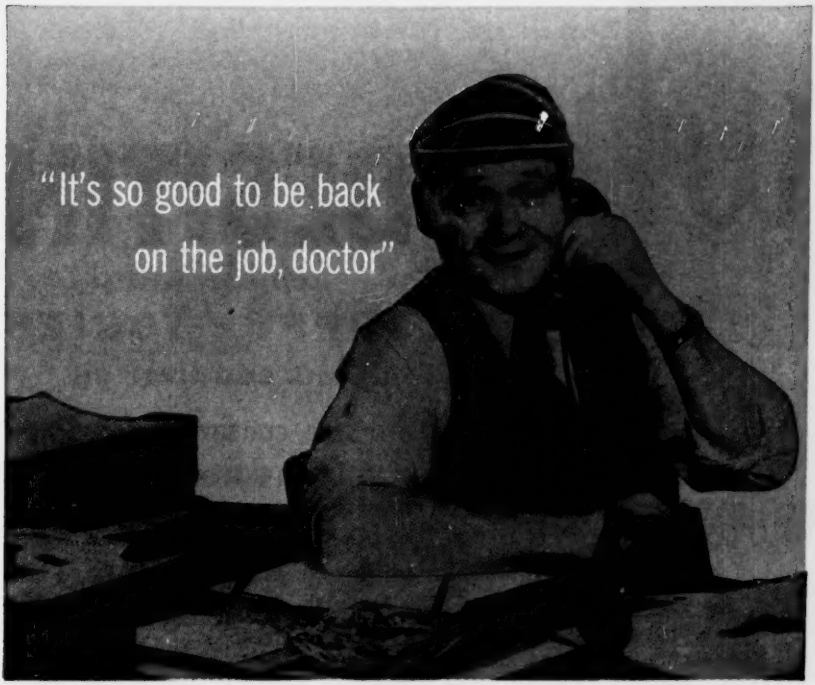
M.D., Virginia

ANSWERS: *By Consultant in Urology.* Organic bases for impotence include various diseases of the nervous system, severe long-standing diabetes, absence or destruction of the testicles by disease or trauma, and some dysfunctions of the endocrine glands. The urologist must see that these conditions are not overlooked and, if no organic lesions are found, refer the patient to a competent psychiatrist.

*By Consultant in Psychiatry.* This condition seems to be anxiety-induced, with the roots of anxiety stemming from conditions in the patient's everyday life or from attitudes developed in relation to his sexual partner.

The therapist may arrive early at a formulation of the problems, but the patient must be led slowly in a number of hourly sessions to a recognition of his feelings—especially hostility directed toward his mate or coming from her. By working through his feelings in relation to the partner in general, and more particularly during coitus, his potency will probably return.

Great therapeutic skill is necessary to point out attitudes and maintain the patient's interest in his own feelings. The mate's attitude is always operative in cases of this type, so that, with permission of the patient, she should be brought into the discussion occasionally.

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**SUPPOSITORIES**

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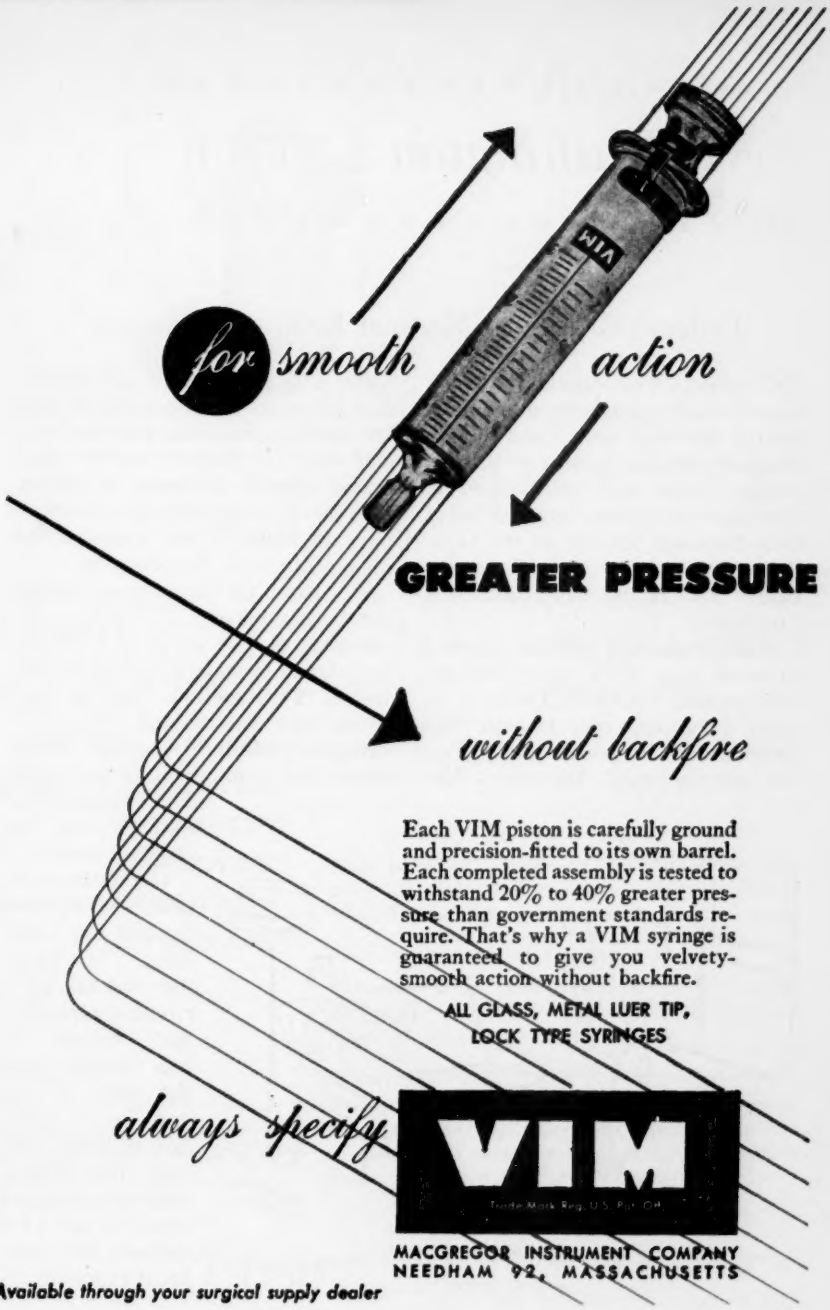


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# *Washington* LETTER

## Federal Grants to Medical Research Increase

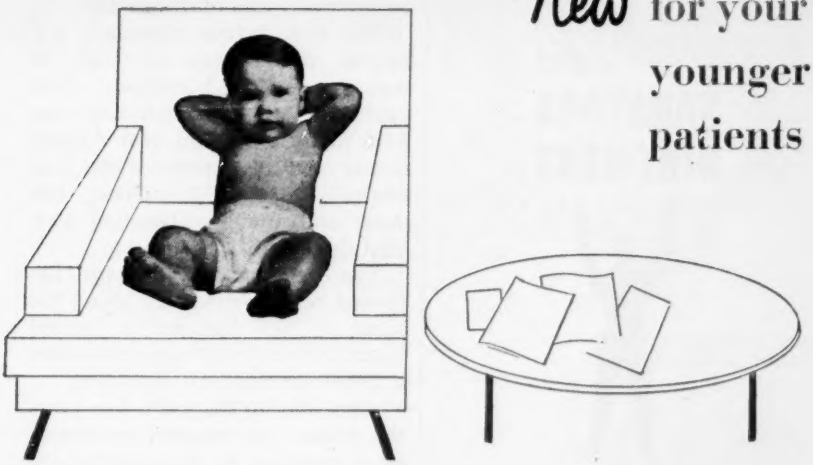
THE objective of federal grants-in-aid is to induce states or municipalities to develop more and better programs for the benefit of all the people. How well this system is working was demonstrated by Surg. Gen. Leonard Scheele of the U. S. Public Health Service in testimony before the House Appropriations Committee.

The committee, possibly hoping to show how PHS appropriations had grown, asked Dr. Scheele to make a complete report on all PHS expenditures in health grants over the past ten years. The report does show, it is true, steady and significant increases in money distributed for medical research. But the federal cost of disease control programs almost without exception held steady or actually started dropping off within a few years of the inauguration of the programs.

For example, the federal government spent almost $10 million on venereal disease control in 1943, in contrast to state and local spending of $7.5 million. But by last fiscal year the federal costs had dropped back to $9.4 million, while states and municipalities had more than doubled their appropriations for venereal control.

The statistics on tuberculosis control tell the same story. In 1946, the federal government expended $6.8 million on this work, and the states, cities, and towns about $52 million. Last year the federal appropriation had dropped to $5.8 million, but state-local expenditures


*"You'd be nervous, too, if you were in a fifteen-minute parking zone!"*



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*new economy in drop dosage treatment*

Each bottle of Terramycin Pediatric Drops supplies 1.0 gram of Terramycin, often a sufficient total dose for therapy of many common illnesses.

*delicious raspberry flavor*

The same good taste which makes Terramycin Oral Suspension a favorite for older children and adults on broad-spectrum therapy.

*new flexibility in infant dosage schedules*

Nonalcoholic Terramycin Pediatric Drops supplies 100 mg. of pure crystalline Terramycin amphoteric in each cc. to meet most infant dosage requirements; may be diluted as required.

**SUPPLIED:**

10 cc. bottles containing 1.0 Gm. crystalline Terramycin amphoteric in raspberry-flavored, nonalcoholic vehicle with specially calibrated dropper.

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amounted to about $140 million, or an increase of more than 100%.

The first federal spending for cancer control came in 1948. It was an even $2.5 million. That year the state-local spending was $4.5 million. By last year federal cancer control appropriations had worked up to $3.1 million, but states and municipalities had doubled their ante.

The proportional changes for mental health work were about the same, a 10% increase in federal funds in five years, contrasted with a 100% increase in state-local.

Also, during the same five years the federal government inaugurated a program to demonstrate the value of topical application of fluorides to teeth and already has closed out the program. States now are doing this work entirely on their own.

The economy-minded committee was well pleased with what it saw in these grants programs: strictly-limited federal programs that stimulated states to do more public health work. But in research work, the statistics tell the kind of a story this Congress doesn't like: a continuing increase in federal expenditures with no limit in sight.

In 1945 the United States spent $123,000 for medical research grants. In 1946 the total had gone to $1 million and in 1947 to $3.7 million. In the last six years, spending in this area has gone to $23 million annually, with a substantial addition asked for next fiscal year. The government's own medical research program is on a similar escalator. In 1945 the cost was $2.3 million. Last year the figure was $17.6 million, and next year probably will go to $20 million.

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Over the same years nonfederal spending has increased but at a slower rate than federal spending. One of the problems is that there is no workable formula that can be used to pry money out of state legislatures and city councils to match federal research funds the way control or informational funds are matched.

### FDA Jurisdiction Broad

In testifying before the same House Appropriations committee, Commissioner C. W. Crawford of the Food and Drug Administration disclosed that FDA is responsible for policing products worth $50 billion. "Throughout this entire sweep," said Mr. Crawford, "FDA is expected to protect the health and welfare of consumers against adulteration, misbranding and other offenses which may occur in the marketing of these products."

As outlined by Mr. Crawford, some of FDA's responsibilities include:

1] Insuring that new drugs are not distributed in interstate commerce until adequately tested for safety; preparations such as insulin and some antibiotics must be tested and sampled batch-by-batch.

2] Making regulations establishing standards of identity and quality, including control over labeling of dietary foods.

3] Constant factory and shipment inspections to insure that foods and drugs meet the required standards.

Mr. Crawford also appealed to the committee to take early action on legislation to correct a serious defect in the FDA enforcement machinery. A Supreme Court ruling in December deprived the agency of the right to make surprise or "unannounced" factory inspections. Legislation setting forth this authority was introduced early

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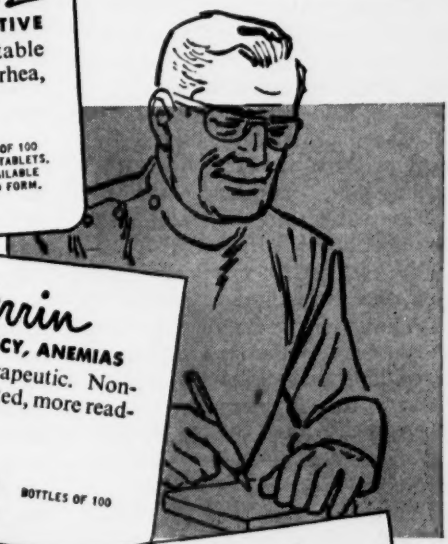

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in the session, but for some reason Congress was slow to act on it. One explanation might be the demand of drugstores that the bill be changed to make it clear that pharmacies would not be subjected to the unannounced inspections.

### Washington Notes

¶ Physicians who might be inclined to pad their lists of poliomyelitis cases to insure themselves a larger supply of gamma globulin this summer will run into trouble: U. S. Public Health Service is calling on all states to report poliomyelitis cases as paralytic or nonparalytic, providing a constant, accurate check of the amounts each physician should be furnished.

¶ The Defense Department reorganization, scheduled to go into effect about July 1, promises to firmly establish civilian supervision of the military medical services; a new assistant to the secretary will be expected to follow closely all medical situations and to formulate new policy.

¶ The body armor in use in Korea is resulting in a significant shift in casualty statistics; a growing number of men wounded in the extremities as well as the body are being saved, bringing about a significant increase in the rate of amputations. Some thought is being given to developing a new type of helmet to give more protection.

¶ The new U. S. Clinical Center at Bethesda, Md., scheduled to open July 1, could have opened two months earlier except for a "job freeze" order laid down by the administration in February, just when recruitment for the research hospital was well under way. It was two months before PHS was able to get the "freeze" order lifted for the hospital. Under the order all federal departments were forbidden to hire more employees.

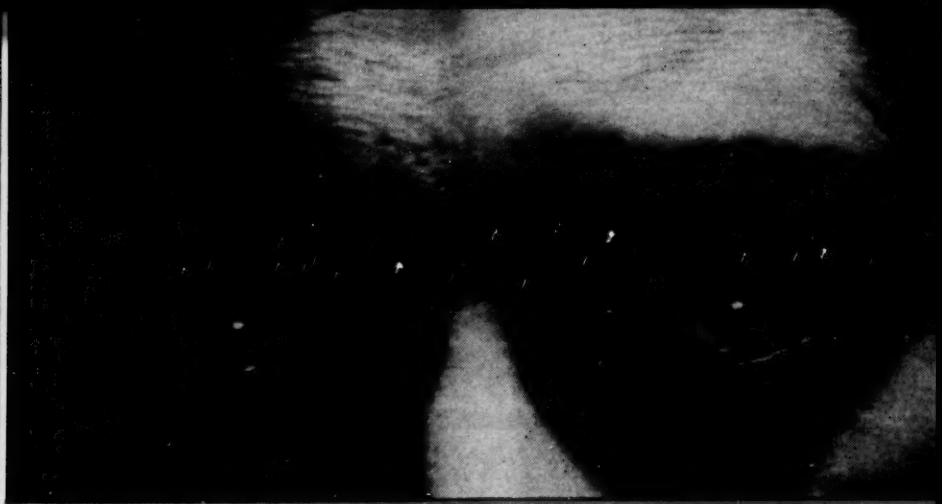
¶ Chairman Dewey Short (R.,Mo.) of the House Armed Services committee is making a determined but so far unsuccessful attempt to force the services to commission doctors of osteopathy. Under the law the services may commission osteopaths at any time they wish, but so far have not.

¶ A number of bills introduced late in the session propose extending or lifting the limitation on the percentage of medical expenses that may be deducted from earned income for federal tax purposes.

¶ Unless some snag develops in the last days of Congress, the appropriation ceiling of $15 million on National Science Foundation will be eliminated; chances are that for a long time this will be only of academic interest, as Congress has not yet voted the full amount.

¶ Sen. Taft wants Congress to give a national charter to the Fund for Medical Education, the organization initiated by AMA to provide private support to medical colleges.

¶ AMA's demand that all doctor veterans be relieved of further obligation under the Doctor Draft Act had one beneficial result; the bill was amended to forbid the induction of any with twenty-one months or more of active duty to their credit. This will affect all but a small portion of the World War II doctors.



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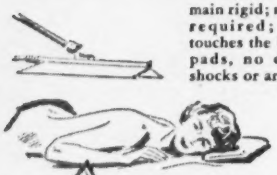

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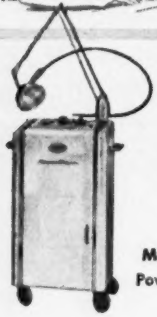

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# THE EDITOR'S PAGE

*by* WALTER C. ALVAREZ, *Editor-in-Chief*

## The Erythrocyte Sedimentation Rate

It is unfortunate that many physicians fail to use the erythrocyte sedimentation rate as a means of quickly recognizing the presence or absence of serious disease. In my hands during the last twenty years it has been of tremendous help; many a time it has kept me from diagnosing a pure neurosis when the patient also had a cancer.

My preference is for the Westergren method, which gives a wide range of measurements from 1 to approximately 120 mm. in an hour. With rates up to perhaps 25 mm., the patient is usually in good or fair health. With rates between 25 and 35 mm., the patient may have slight arthritis; with readings between 50 and 65 mm., there may be rheumatoid arthritis; with readings above 80 mm. or so, the chances are that the patient has either some acute inflammation, such as pneumonia, or perhaps a carcinoma with metastasis.

The sedimentation rate is very helpful, also, in differentiating functional diarrheas from diarrheas caused by regional enteritis or chronic ulcerative colitis. With functional diarrhea, the rate is likely to be normal, while in the presence of an inflamed bowel it is apt to be around 50 or 60 mm.

Every day in my office the sedimentation rate is of great value in helping differentiate a harmless fibrositis from a moderately troublesome arthritis or a serious rheumatoid arthritis.

The sedimentation rate can be very helpful in saving the reputation of the city consultant who so often has to decide quickly whether a patient who has come from a distance has a serious disease or only a functional one. In most such cases the

wise consultant will not "stick his neck out" until he has measured the "sed rate." He may think he is dealing with a neurosis until he gets the report that the rate is around 100 mm. Then a careful study may reveal a silent cancer of the fundus of the stomach or of the cecum or rectum.

In an Oslo hospital, Dr. Knut Kirkevy and Dr. Paul Leren recently studied the prognostic value of the blood sedimentation rate as it had been used in the preceding six years. They examined the records of all patients who had had Westergren blood sedimentation rates of over 100 mm. per hour. Of 348 patients, 82 had pneumonia. Since this was fatal for only 1 patient, the high sedimentation rate evidently did not indicate a bad prognosis. Of 60 patients with chronic kidney disease, 33 died, indicating that in cases of chronic nephritis a high rate is a bad sign and means that the person is dangerously ill.

In all of the 49 cases of cancer and high rates, the disease was found to be inoperable because of metastasis. Of the 49 persons, 45 were dead in a few weeks.

Interestingly, there were 14 patients with high rates for whom no definite diagnosis could be made. I personally have never seen a rate over 100 mm. in an hour which I could not explain, but I have seen a few women with rates around 60 or 70 mm. who did not seem to have much wrong with them and who, in the course of the next few years, did not come to a bad end. I suspect that these women had slight rheumatoid arthritis with but little pain in the joints.

I have found the blood sedimentation rate helpful in reassuring patients who have had carcinomas excised. If, during the next six months their blood sedimentation rates, which have been perhaps around 30 mm. in an hour, go down to 10 mm. in an hour, the chances are great that they are cured. If, however, the sedimentation rate slowly rises after operation, the chances are that metastasis is present and that other signs of recurrence will soon appear.

### Colchicine for Hodgkin's Disease

From France, P. Isch-Wall reports in *Sang* that he used colchicine in 4 cases of Hodgkin's disease because of the drug's tendency to stop mitosis. The results of 3 mg. given intravenously every three days are said to have been excellent.

*For the routine determination of bacterial susceptibility, the paper disk or tablet method is preferable.*

# Bacterial Sensitivity Tests

J. M. SEVERENS, PH.D.
*Creighton University, Omaha*

THE antibiotic sensitivity of an infecting agent must be known before efficient use can be made of the wide variety of antimicrobial drugs now available. For most routine purposes, J. M. Severens, Ph.D., believes that the paper disk or tablet method of estimating bacterial susceptibility is to be preferred over the test tube dilution technic.

The disk test is readily performed in any laboratory equipped to make bacterial cultures. Filter paper disks or tablets impregnated with antibiotic solutions of the desired concentration and a suitable culture medium are the essential materials. The blood agar plate is most satisfactory as a medium. This provides the necessary food elements for a large number of pathogenic bacteria and aids in identification of the organism by indicating hemolytic properties.

The agar plate is first inoculated with a uniform suspension of the infectious material. As many as 7 or 8 disks may then be placed on the surface of a plate, allowing either several antibiotics or several concentrations of an antibiotic to be evaluated.

The antibiotic sensitivity is determined after a suitable incubation period by observing the zones of inhibition produced in the areas immediately surrounding the disks. The drug showing the greatest inhibition is the one preferred for therapy.

The commercially prepared disks of lower concentrations are such that the susceptibility of the bacteria at levels attainable by therapy may be tested. Disks of high concentration are available to obtain information about cultures that show a fair degree of resistance.

With the antibiotic disk method, results are often available to the clinician in six hours, and always within eighteen, thus permitting an alteration of therapy without undue loss of time. The results of the disk test should be interpreted as an indication of susceptibility or nonsusceptibility only, and no more than rough quantitation may be assigned to an estimation of the size of the zone of inhibition.

Factors such as size of the inoculum, depth of the agar, moisture content, and diffusibility of the antibiotic cause tremendous variation in the areas of inhibition. In most instances the relative effectiveness of the various antibiotics can be

Methods for determining bacterial susceptibility to antimicrobial agents and their relative value to the clinician. Nebraska M. J. 38:126-129, 1953.

judged when several disks are employed on one plate.

When accurate determination of sensitivity is an important factor, the test tube dilution method is indispensable. Since this procedure requires isolation of a pure bacterial culture, preparation of a standard inoculum, and inoculation of the serially diluted antibiotic, significantly more time and expense are involved.

The dilution method should be reserved for special circumstances, such as determining the sensitivity of organisms isolated from cases of subacute bacterial endocarditis or for detecting increased bacterial resistance in patients who relapse during therapy.

¶ PENICILLIN ANAPHYLAXIS may be fatal and occurs often enough to warrant skin testing with high dilutions of persons with questionable hypersensitivity. Of 6 patients observed by Peter S. Mayer, M.D., and associates of the Veterans Administration Hospital, Hines, Ill., and the University of Illinois, Chicago, all had had previous antibiotic therapy and 4 reported prior sensitivity reactions. Intradermal direct testing with the drug produced immediate wheal formations in 2 of 3 cases and an almost fatal constitutional response in the third. Passive transfer demonstration of circulating reagins for the substance was successful in 4 of 5 instances. One patient previously inadequately treated for syphilis died in anaphylactic shock within a few minutes of receiving 300,000 units of procaine penicillin intramuscularly. None of the 6 was sensitive to procaine.

*J.A.M.A. 151:351-353, 1953.*

¶ TRIPLE SULFONAMIDE MIXTURES and Gantrisin are equally well absorbed and have in vitro antibacterial spectra similar in activity and scope. David Lehr, M.D., of the New York Medical College, New York City, finds that maintenance blood levels are twice as high with combined sulfadiazine, sulfamerazine, and sulfamethazine but that urinary concentrations are 3 to 6 times greater with Gantrisin. The triple mixtures are probably best for treatment of systemic infections whereas Gantrisin is more desirable for urinary antisepsis. Far better diffusion through the hematocephalic barrier occurs with the sulfapyrimidines. The incidence of sensitization with the 3 drugs in equal amounts is no greater than with the single components in full dosage, but potentiation occurs. As the solubility of Gantrisin and the acetyl derivative is inadequate in urine with an acidity in excess of *p*H 4.5 to 5.5, alkalinization may be necessary to prevent renal complications.

*Antibiot. & Chemother. 3:71-93, 1953.*

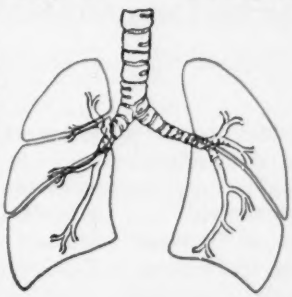
*The author does not concur with the concept that no symptoms or signs aid detection of early primary pulmonary cancer.*

# Early Diagnosis of Bronchogenic Cancer

JIM S. JEWETT, M.D.
*Veterans Administration Hospital, Coral Gables, Fla.*

DESPITE recent advances in thoracic surgery, the cure rate with bronchogenic carcinoma still remains discouragingly low, largely because of late recognition. Primary cancer of the lung is now the most common fatal cancer in males.

In a review of 150 cases, Jim S. Jewett, M.D., noted a delay in diagnosis of about 10.5 months from the onset of symptoms, 6.4 months of which could be attributed to the physician. Three types of diagnostic errors are involved in this delay: [1] lack of suspicion of minor respiratory symptoms, [2] neglect to obtain a chest roentgenogram early in the illness, and [3] failure to recognize significant abnormalities revealed radiographically.



Tumors arising within the main or lobar bronchi, comprising 58% of the cases described, typically will produce early symptoms of bronchial irritation, recurrent pulmonary infection, or hemorrhage. Early roentgenographic changes include slight unilateral nodular hilar enlargement and localized emphysema or atelectasis, though the latter is more commonly a late finding.

Approximately one-fourth of patients with tumors of the major bronchi have an insidious onset of symptoms such as malaise, fatigue, vague pain, and weight loss. Occasionally exacerbations of illnesses involving other systems, such as peptic ulcer, arthritis, and cardiac disease, mark the start of lung tumors. Thus, the routine use of the chest roentgenogram identifies lesions which may otherwise remain undiagnosed for long periods.

Cancers of the segmental bronchi, 19% of the cases studied, also entail early recurrent infections and hemoptysis. Atelectasis of the distal pulmonary segments, however, occurs early with these tumors. The segmental densities on chest roentgenograms may be mistaken for tuberculosis if in the upper lobes, for pneumonitis if in the lower lobes.

Lesions involving the small bronchioles in the periphery of the bronchial tree, accounting for 23% of the cases, tend to produce

The early recognition of bronchiogenic carcinoma. Dis. of Chest 22:699-708, 1952.

symptoms late. Deeply located tumors usually become symptomatic only when large enough to invade the larger bronchi. Those originating near the pleura produce intractable pain by invasion of the pleural surfaces, chest cage, and adjacent viscera or vertebrae. Hypertrophic pulmonary osteoarthropathy may appear before local pulmonary symptoms are noted. These carcinomas are not generally discovered while still in a resectable state except by routine chest roentgenogram.

More than one-third of all solitary pulmonary masses are primary pulmonary malignant growths. If all diagnostic studies have failed to establish the etiology of a mass as definitely noncancerous, exploratory thoracotomy should be done without a delay. A primary pulmonary carcinoma may remain unchanged in radiographic appearance for many months while multiple hematogenous metastases occur. The only solitary lesion which may be watched without danger is that containing calcium, which is either a tuberculoma or a benign tumor.

## Micrococcic Enteritis from Antibiotic Therapy

WILLIAM H. DEARING, M.D., AND FORDYCE R. HEILMAN, M.D.

RESISTANT strains of *Micrococcus pyogenes* may develop as a result of the administration of antibiotics such as terramycin and aureomycin. When, during therapy, organisms multiply in the bowel, causing enteritis, erythromycin may be lifesaving.

After investigation of bacterial resistance in 44 medical and surgical cases, William H. Dearing, M.D., and Fordyce R. Heilman, M.D., of the Mayo Clinic, Rochester, Minn., have either abandoned the use of terramycin and aureomycin in preparation for intestinal surgery or examine the intestinal contents microscopically at operation.

If significant numbers of micrococci are found, erythromycin is started immediately after surgery.

Terramycin and aureomycin should be used only when indicated, not for minor illness. If diarrhea develops, medication is stopped at once, and both smears and cultures are made from the stools. When smears contain micrococci and the patient is gravely ill, erythromycin is given promptly by mouth in doses of 300 to 400 mg. four times daily. With less serious involvement, results of culture may be awaited before starting specific therapy. Individuals having no major operation or disease may recover after symptomatic therapy alone.

Micrococcic (staphylococcic) enteritis as a complication of antibiotic therapy: its response to erythromycin. Proc. Staff Meet., Mayo Clin. 28:121-134, 1953.

*Cardiac neurosis untreated is self-perpetuating, but is successfully treated by confident reassurance.*

# Iatrogenic Heart Disease

HARRY B. WEINBERG, M.D.
*Mercy Hospital, Davenport, Ia.*

WHEN symptoms referable to the heart, or so interpreted by the patient, are produced as a result of the words or actions of a physician, the condition is known as iatrogenic heart disease. This disease, which is preventable, produces considerable morbidity and may easily be more disabling than ordinary organic heart disease.

Treatment of iatrogenic heart disease is specific and differs from the management of any other type of cardiac disorder, explains Harry B. Weinberg, M.D.

Prevention is the most important aspect of the problem. Several possible initiating factors may lead the patient to believe that he has heart disease: [1] misinterpretation by the patient of innocuous statements by the physician, [2] ill-considered remarks or acts of the physician, and [3] error by the physician in interpreting symptoms or findings.

The common reaction of a person when receiving a diagnosis of heart disease is fear. Anxiety neurosis or neurocirculatory asthenia may ensue, causing symptoms of such a nature as to suggest to the individual that cardiac function is disturbed. A vicious circle is started, consisting of anxiety-producing symptoms causing further anxiety.

The manifestations of iatrogenic heart disease are those commonly produced by anxiety. Palpitation, fatigability, breathlessness, precordial pain, apprehension, trembling, dizziness, syncope, tachycardia, paresthesias, and cold, clammy hands and feet are frequent.

Untreated, the malady is self-perpetuating because the symptoms continue to suggest cardiac abnormality and maintain the patient's fears. The prognosis in treated cases depends on many factors. Results are usually best when the process is of short duration.

The emotional make-up of the patient is important. Some are basically psychoneurotic; others are not intelligent enough to understand a reasonably simple explanation of the origin of a pain near the heart and hence persist in believing that the condition is heart disease.

Treatment depends on successful reassurance of the patient. The doctor must conduct an examination sufficiently extensive to convince himself and the patient that the heart is sound. The use of all the supplementary tools of cardiovascular study is encouraged to add authenticity.

The reassurance, to be effective, must be clear-cut and without qual-

Iatrogenic heart disease. Ann. Int. Med. 38:9-22, 1953.

ifications. As far as possible, the differing medical opinions that the patient has received should be reconciled, but at times a blunt disagreement with previous medical pronouncements is necessary. An adequate explanation to show how the symptoms have resulted from fears is essential.

Pointing out that the symptoms are not dangerous to life, no matter how distressing subjectively, is helpful. The patient should know that the symptoms will leave if apprehension is relieved but may persist if the fears are retained at a conscious or subconscious level.

Attempts to carry on in spite of symptoms are important. Efforts at compromise, such as advice to take things easy, may be disastrous by negating the assurance of cardiac soundness. At times, unqualified assurance that the heart is absolutely normal must be given even when slight doubt exists.

## Cortisone and White Blood Cell Counts

HENRY J. KOWALSKI, M.D., WILLIAM E. REYNOLDS, M.D., AND DAVID D. RUTSTEIN, M.D.

IF HEALTHY persons are given 50 mg. of cortisone acetate by mouth, the neutrophil count rises and the lymphocyte and eosinophil counts fall during the next few hours. If the drug is given intramuscularly, the neutrophil and total leukocyte counts will rise and remain elevated for more than fourteen hours, although the lymphocyte and eosinophil counts are unaffected.

Varying amounts of discomfort are experienced at the site of injection and are directly related to the magnitude and duration of the white cell count changes. The local distress begins several hours after the injection, gradually increases throughout the day, and persists for about two days.

After administering cortisone acetate, 50 mg., by mouth and later by intramuscular injection to 8 healthy young persons, Henry J. Kowalski, M.D., William E. Reynolds, M.D., and David D. Rutstein, M.D., of Harvard University, Boston, conclude that the white cell count alterations arise not only from pharmacologic effects of the drug but also partly from mechanical irritation at the site of injection.

Intramuscular injection of the aqueous vehicle without the cortisone produces a rise in total white cell count closely resembling the trend after oral administration, but the rise is less than that produced by the vehicle with the cortisone. Local irritation rarely appears after administration of the vehicle alone.

**Changes in white blood cell counts after administration of cortisone acetate to healthy ambulatory individuals. J. Lab. & Clin. Med. 40:841-850, 1952.**

¶ WITHDRAWAL SYMPTOMS may follow abrupt cessation of prolonged medication with the hydrazine derivatives of isonicotinic acid for tuberculosis. Therefore, the compounds should be discontinued gradually. Irving J. Selikoff, M.D., Edward H. Robitzek, M.D., and George G. Ornstein, M.D., of Sea View Hospital, New York City, find a definite pattern developing within forty-eight hours in two-thirds of patients after iproniazid therapy is terminated, but in fewer instances and with less intensity when isoniazid is stopped. The manifestations, all referable to the central nervous system and occurring only after therapy lasting more than six weeks, include headache, exaggerated and terrifying dreams, vertigo, nervousness, hyperreflexia, insomnia, irritability, and depression. These sequelae seldom require therapy, but barbiturate sedation gives fairly satisfactory control. Prostigmine is administered for relief of the headache.

*Am. Rev. Tuberc. 67:212-216, 1953.*

¶ HEART BLOCK and Adams-Stokes disease may result from a nonpenetrating injury to the thorax. Although two years had elapsed between an accident and electrocardiographic discovery of complete block in a man with rheumatoid spondylitis, Raymond K. O'Cain, M.D., of the Mayo Foundation and Harry L. Smith, M.D., of the Mayo Clinic, Rochester, Minn., found no evidence of other cause; the heart had previously been normal. Electrocardiograms should be obtained more frequently in examinations after thoracic trauma so that cardiac damage may be found early.

*Dis. of Chest 23:171-174, 1953.*

¶ PERNICIOUS ANEMIA may be satisfactorily treated by inhalation of crystalline vitamin $B_{12}$. Adequate hematologic improvement without signs of toxicity or sensitivity is reported for 2 patients with severe pernicious anemia and 1 with less pronounced involvement and in 3 cases of relapse. Detectable amounts of $B_{12}$ activity appear in the urine after pulmonary administration. Raymond W. Monto, M.D., John W. Rebuck, M.D., and Michael J. Brennan, M.D., of the Henry Ford Hospital, Detroit, describe use of the vitamin in physiologic saline and lactose dust. In 2 cases therapy was begun with 15 $\mu$g. of the drug per 1 cc. of physiologic saline given daily for six days by means of a pressure tank and Vasonephrin nebulizer; later the substance was self-administered by 1 of the patients with a hand atomizer. A third patient receiving parenteral vitamin $B_{12}$ took 10 deep inhalations per administration from an Aerohalor containing 1,000 $\mu$g. of the vitamin in 0.1 cc. by volume of lactose powder.

*Am. J. M. Sc. 225:113-119, 1953.*

*In cases of constant strabismus, the sooner the visual axes are restored to normal alignment the better.*

# Therapy for Nonparalytic Strabismus

T. KEITH LYLE, M.D.
*Westminster and Central Eye Hospital, London*

THE child with squint is seldom too young for some form of treatment and never too young for examination so that the parents may be advised of future therapy.

Three types of treatment are available against strabismus: [1] optical, to correct refractive errors; [2] orthoptic, including occlusion, to educate or restore binocular function; and [3] surgical, to align the visual axes. The three methods are not alternatives or mutually exclusive. The correct approach may involve 1 or 2 of the methods, even all 3.

In the therapy of nonparalytic strabismus, the sooner the normal alignment of visual axes is restored by one means or another, the better. However, if the child is sufficiently young and the strabismus is of an intermittent nature or occurs only for certain distances of fixation and can be partially controlled by appropriate spectacles, an expectant period may be allowed to elapse.

*Optical*—Spectacles can be worn by an infant less than a year of age provided special precautions are taken with frames and safety lenses, but glasses are useless unless the baby has a relevant refractive error. Optical measures may be of value by improving visual acuity, reducing the angle of deviation, and restoring binocular function and parallelism of the visual axes.

*Orthoptic*—Until the child has sufficient mental development to cooperate, orthoptic treatment with complicated apparatus cannot be used. However, improvement of the vision of the deviating eye and prevention of stabilization of anomalous binocular relationship can be accomplished by occlusion even during infancy.

Binocular stimulation using a synoptophore or troposcope may overcome suppression and anomalous retinal correspondence of older children, resulting in fusion and stereoscopic vision, but the angle of deviation may be greater than can be corrected by improving the fusional reserve. Surgery is then required. Orthoptic aids should be regarded essentially as a means of improving the binocular functions, not necessarily as a method of eliminating an angle of deviation.

*Surgical*—In planning operation to cure convergent strabismus, T. Keith Lyle, M.D., recommends the following aims: [1] the visual axes

Orthoptic and surgical treatment of non-paralytic strabismus. Bull. New York Acad. Med. 29:235-248, 1953.

should appear straight, not only in the primary position but in all directions of gaze. [2] The eyes should appear normal and symmetric. [3] The power of convergence should not be weakened. [4] If doubt exists as to whether binocular single vision will result, a small residual convergent deviation should be left.

In general, the medial rectus should not be retroplaced more than 5 mm. in infants or more than 6 mm. in older children or adults. To try to overcome an angle of deviation greater than 25 to 30° by an operation on one eye is unwise. The patients or parents should be told, too, that more than one operation may be necessary.

The treatment of secondary or consecutive divergent strabismus presents a cosmetic surgical problem.

Operation is indicated for both intermittent and constant primary divergent strabismus. In the former cases, liberal recession of the lateral rectus of the usually diverging eye is done if the divergence occurs mainly when viewing distant objects. A recession of the other lateral rectus is made subsequently if symptoms persist.

If the divergence occurs mainly when viewing near objects, a resection or plication of the medial rectus is needed, besides recession of the lateral rectus. Liberal recession of the lateral rectus and plication or resection of the medial rectus are usually necessary for patients with constant divergent strabismus.

The aim of surgery for divergent strabismus, whether of the intermittent or constant type, is to render the visual axes just a few degrees convergent.

## Alcohol Pain with Hodgkin's Disease

JØRGEN BICHEL, M.D., AND POUL BASTRUP-MADSEN, M.D.

THE ingestion of even small quantities of alcohol often produces severe pain in cases of Hodgkin's disease. This pain may be the initial symptom of the disease and is of diagnostic significance.

Jørgen Bichel, M.D., of the University of Aarhus and Poul Bastrup-Madsen, M.D., of Marselisborg Hospital, Aarhus, Denmark, report the symptom in 9 of 62 patients with Hodgkin's disease. The pain is localized in the sites of lymphogranulomatous foci, such as the peripheral lymph nodes, the mediastinum, or bone, apparently in whichever focus is the most active. The sensation starts a few minutes after ingestion of alcohol and persists thirty to sixty minutes until the greater part of the liquor is oxidized.

Other vasodilating agents do not produce the pain nor does alcohol pain appear with other types of lymphomas.

Alcohol pain in Hodgkin's disease. Lancet 265:764-766, 1953.

*Cutaneous reactions to sunlight differ with the individual, state of health, and length of exposure.*

# Diseases Related to Sunlight

BEATRICE MAHER KESTEN, M.D., AND MEYER SLATKIN, M.D.
*Columbia University, New York City*

SEVERAL types of skin lesions are precipitated by sensitivity to sunlight. Since most such sensitivity occurs within the ultraviolet spectrum, substances that absorb ultraviolet light may often be effectively applied as sun screens, observe Beatrice Maher Kesten, M.D., and Meyer Slatkin, M.D.

## APPARENTLY NORMAL SKIN

When well persons with apparently healthy skin are exposed to sunlight, various reactions may occur.

*Solar erythema* includes the transient cutaneous redness, with or without edema, that develops shortly after slight exposure to sunlight and is probably caused by the ultraviolet spectrum. The erythema, drying, and itching that appear after exposure at short range to fluorescent light not protected by plate glass probably have a similar etiology.

*Chronic polymorphic light eruptions* include eczematous and prurigo-like lesions. The eczematous condition has localized plaques of dermatitis or more widespread pruritic vesicular lesions. Urticaria-like papular and nodular lesions appear with the prurigo type. Most of these patients are sensitive to ultraviolet light, usually within the sunburn spectrum.

*Solar urticaria* may appear in otherwise normal persons after brief exposure and is confined to the exposed areas. Longer periods of sunlight cause generalized urticaria, edema, and syncope. These patients may react to visible, ultraviolet, or infrared light.

*Photodynamic dermatoses* are produced by sensitization of skin to light by a substance serving as a light absorber. Such substances may cause absorption in both ultraviolet and visible light spectra. Sulfonamides, dyes, porphyrins, and some barbiturates are sensitizing agents.

When traumatized moist skin comes into contact with plant juices and is subjected to sunlight, dermatitis and pigmentation may follow. Application of some toilet waters, perfumes, citron, and bergamot oil produces similar reactions on intact skin. Chronic melanosis may occur after long contact with coal tar, oils, and pitch and exposure to sun.

## PRESUMABLY ABNORMAL SKIN

Light sensitivity is a common feature of congenital porphyria. Photosensitization may be severe, and dermatitis, wheals, or hydroa-

Diseases related to light sensitivity. Arch. Dermat. & Syph. 67:284-301, 1953.

like lesions appear. Eruptions are rare with acute intermittent porphyria of adults and the lesions have not been proved to be caused by sunlight. In chronic porphyria, the complexion has a dusky-red hue and epidermolysis-bullosa-like lesions appear after exposure to sunlight, heat, or trauma.

More patients with photodermatoses have increased coproporphyrins than do those with other dermatoses. However, the presence of abnormal amounts of urinary coproporphyrin is not considered a diagnostic test for photosensitivity.

With hydroa vacciniforme or epidermolysis bullosa, aggravation or precipitation of lesions may be associated with exposure to sunlight. Increased sensitivity is demonstrated in xeroderma pigmentosum, which sunlight may accelerate.

Almost any infection may induce or facilitate temporary or intermittent photosensitivity. Steroid metabolism may be disrupted by abnormal reactions to sunlight; sensitivity to sunlight may occur in patients who have abnormal steroid secretion.

Sunlight may bring out typical lesions during the acute stages of pellagra, lupus erythematosus, keratosis follicularis, or pityriasis rubra pilaris. Exposure may intensify lesions with papular urticaria.

### PROLONGED EXPOSURE

Persistent alterations, such as freckles, degeneration of collagen and elastic tissue, or chronic sunburn, with or without warty excrescences, may occur after prolonged exposure of the skin. Excessive prolonged exposure of fair-skinned blue-eyed persons may sometimes stimulate production of malignant tumors.

### SUNBURN PROTECTION

The accommodation of healthy normal skin to sunlight is achieved by gradual exposure to the actinic rays of the sun. The main mechanism is thickening of the horny layer. This layer will absorb light strongly in the ultraviolet part of the spectrum, and the flattened and granular layers reflect and scatter light, preventing contact with the sensitive prickle cells. Sweating and tanning offer some protection.

Commercial sunburn preventives usually consist of a chemical which absorbs the sunburn spectrum and is incorporated in a suitable vehicle. Some contain a chemical which, because of physical properties, scatters light. The most suitable and widely used is titanium dioxide. The vehicles also may have a limited capacity to absorb erythemal radiation.

Sun screens are chemicals which absorb light in the ultraviolet but not in the visible part of the spectrum. Most are aromatic compounds. Commercial ointments incorporating 15% para-aminobenzoic acid or 5% cycloform offer excellent protection. The product should not protect normal persons completely, but should allow some erythemic response after long exposure. Thus natural adaptation may be acquired. For abnormal skins, filtering out the longer wave lengths as well as the sunburn spectrum may be necessary.

*Recurrence of clubfoot usually is the result of incomplete original correction of the deformity.*

# Treatment of Congenital Clubfoot

J. HIRAM KITE, M.D.
*Atlanta, Ga.*

THE cast and wedging method of correcting equinovarus clubfoot sometimes fails because poor technic is employed, even by good orthopedists.

The most common error is to start dorsiflexion before adduction of the forefoot and inversion of the heel are eliminated. A second mistake is improper molding of the cast, which may slip at the heel and force the foot into an equinus position worse than the original deformity.

To produce the desired result, the finished cast must be shaped like a normal foot. The sole should be flat. A depression is formed just above the heel, to follow the natural curve and hold the bandage.

When molding the plaster shoe, J. Hiram Kite, M.D., places the foot on a section of plate glass. The plate flattens the sole and tilts to any angle required for close fit of the cast above the heel.

Clubfoot can be analyzed largely by careful observation and palpation, since bones lie just under the skin. The beginner is aided by radiograms.

In the initial deformity or after unsuccessful treatment, the head of the talus is typically lateral to the ankle midline, with the talar midline pointing to the third or fourth toe, rather than to the great toe.

The calcaneus rolls under the talus, so that shadows of the 2 bones are superimposed, and anterior portions are not separated. The navicular is observed on the medial side of the talar head, instead of at the front.

If dorsiflexion is attempted before forefoot adduction and heel inversion are fully overcome, equinus deformity will persist in the posterior part of the foot. The midtarsal joint will give way and bend up in a so-called rocker bottom.

The head of the talus forms a prominence laterally on the dorsum of the foot, where a fossa is normally seen.

Probably no orthopedic condition requires more exacting plaster technic in treatment than congenital clubfoot. A plaster shoe is applied with a bandage for the forefoot and another for the heel. Plaster should extend up over the dorsum, but to avoid pressure on the instep, the bandage stops short of the ankle flexure or is cut back.

As plaster hardens, pressure must be exerted at the right points. In bringing the navicular around from the medial side of the talus

Treatment of congenital clubfoot. Am. Acad. Orthopaedic Surgeons 8:181-186, 1953.

toward the front, the tubercle of the navicular is pulled forward.

At the same time, counterpressure is exerted to push the head of the talus behind the navicular, while the heel is turned out into valgus position. Adduction cannot be counteracted by pressing in on the lateral border of the foot at the calcaneocuboid joint.

After the plaster hardens, shoe and foot may be held in slight abduction and eversion. The ankle is dorsiflexed enough to take up the slack, but not forced, and the leg is wrapped with plaster to midthigh. The cast on the lower leg is straight, the knee at a right angle.

The foot is wedged in abduction two or three times, and the cast is then changed. In some instances, wedging is omitted, and a new cast is made for each position.

Abduction continues until the head of the talus slips in behind the navicular and the bony lateral projection is no longer felt. Roentgenograms will show the forefoot straight in front of the posterior foot or out in abduction.

A piece of plate glass is almost as useful as a third hand when plaster is molded to the foot. With ankle in equinus, the foot is placed forward on the glass.

As the foot comes up to a right angle or above, the plate can be raised at one end and allowed to rest against the operator. The foot is shifted farther back to increase dorsiflexion, so the plaster shoe can be molded to fit behind the heel better. Wedging in dorsiflexion is continued on subsequent visits.

When equinus of the heel is corrected, the calcaneus is drawn forward under the talus so that anterior ends of the 2 bones are separate and on the same level.

If faulty methods have caused a severe rocker-bottom deformity and extreme downward pitch of calcaneus and tarsus, more skill and patience are demanded than if no treatment whatever had been given. First, the forefoot must be allowed to assume plantar flexion, to match the posterior displacement. Casts and wedgings are then started again from the beginning.

¶ INTRACRANIAL AND CRANIAL SUPPURATION may be treated without damage to the central nervous system by extensive local and systemic administration of bacitracin. Because organisms are usually sensitive to the antibiotic and no toxicity attends use of the substance, Paul Teng, M.D., and Frank L. Meleny, M.D., of Mount Sinai Hospital and Columbia University, New York City, prefer this antibiotic for therapy of neurologic infections. Satisfactory results were obtained in 3 cases of brain abscess, 3 of septic meningitis, 1 of subdural empyema, and 4 of infected craniotomy wounds; saline solutions of the medicament were applied topically or given intrathecally, intracerebrally, or intraventricularly, with or without intramuscular injection.

*Surgery 33:321-332, 1953.*

*Facial bone fracture in children is rare but requires immediate treatment with definitive methods.*

# Jaw Fractures of Children

NICHOLAS G. GEORGIADE, M.D., FRANK W. MASTERS, M.D., JAMES T. METZGER, M.D., AND KENNETH L. PICKRELL, M.D.
*Duke University, Durham, N. C.*

THE appliance or procedure used for treatment of fractures of the mandible or maxilla in children should be as simple as possible to restore both occlusion and function without unnecessarily disturbing the deciduous and underlying tooth follicles.

Fig. 1. Acrylic splint

Treatment is outlined as follows by Nicholas G. Georgiade, M.D., Frank W. Masters, M.D., James T. Metzger, M.D., and Kenneth L. Pickrell, M.D.

## IMMEDIATE THERAPY

Light palpation will reveal sensitive areas and irregularities of the facial bones. The occlusal relationship, displacement, and the mobility of the jaws should be carefully evaluated. Submucosal hemorrhages usually indicate a fracture site.

Shock should be treated and no sedatives given until diagnosis is definite. Associated injuries of the skull, abdomen, and chest are sought before treatment is initiated.

An adequate airway must be maintained by forward traction of the tongue or a tube if necessary. During transportation, the child's face is kept down without obstructing the mouth, or the head should be turned toward the fracture side.

Except to cover lacerations or

Fractures of the mandible and maxilla in children. J. Pediat. 42:440-449, 1953.

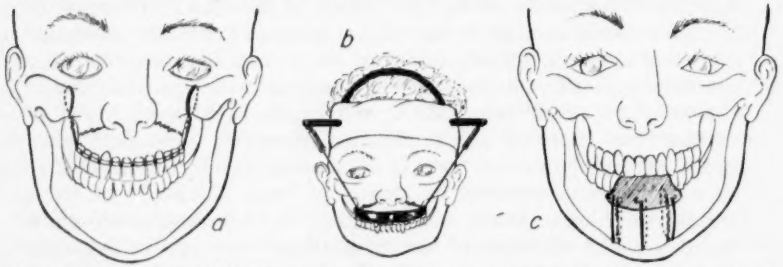



Fig. 2. Stabilization of fracture of maxilla by wires through orbital rim [a]. Arch bars utilized instead of splint [b]. Mandible fracture maintained by circumferential wiring attached to acrylic splint [c].

for temporary support, bandages and dressings are not used. With severe mandibular fractures, bandages may pull the fragments up and back and obstruct the airway.

### DIAGNOSIS

Radiograms are the most important diagnostic procedure, employed as follows:

*When fractures of the mandible are likely:*

Left and right lateral views to show the vertical ramus, angle, and body

Posteroanterior position to show the complete mandible

Laminagrams or stereoscopic films to visualize the temporomandibular joints, condyle, and coronoid process

*When maxillary fracture is suspected:*

Intraoral films with occlusal cassette between the jaws

Stereo Waters position

### FRACTURES OF MAXILLA

To immobilize fractures of the alveolar plates, the loose teeth are supported on an arch bar stabilized on the unaffected teeth. Orthodontic bands or cups may also be necessary.

For an extensive fracture, an acrylic splint that fits snugly around the teeth will give stabilization. If the splint cannot be cemented into position, wire fixation is necessary (Fig. 1).

When the entire maxilla or maxillae are fractured and a sufficient number of sound teeth are present, an arch bar can be wired to the upper teeth (Fig. 2*a*). Anchorage for the bar may be difficult in children under 6, so an acrylic splint over the upper teeth may be necessary. The splints are made from impressions of the upper and lower teeth and the related structures.

A short period of anesthetization may be needed to take the impression.

After proper placement, stainless steel wires are inserted through the soft tissue over the maxillae to connect the splint to a head cast (Fig. 2*b*). To avoid using a head cast, small holes may be drilled in the infraorbital rim and a wire looped around each rim.

### FRACTURES OF MANDIBLE

Uncomplicated fractures of the body of the mandible are treated by manipulation and alignment of the fragments to establish good occlusion and application of a supporting plaster chin cast.

Complicated fractures or those with marked displacement require reduction, using anesthesia, and an acrylic splint. If the teeth are deciduous, bands or wires should not be applied. If the teeth are loose, circumferential wiring of the mandible and splint will be necessary (Fig. 2*c*).

Extraoral fixation is rarely necessary. This method is inadvisable because pins driven into the mandible have a deleterious effect on permanent tooth follicles.

Fractures at the jaw angle may greatly displace fragments. Reduction is accomplished by external traction. A stainless steel wire is placed through the posterior frag-

ment and is connected to a head cast and bar. Elastic traction is applied between the wire and bar.

Fractures near the symphysis can be reduced and maintained by [1] an acrylic splint supported in occlusion by a plaster chin cast, [2] circumferential wiring around a splint, and [3] Kirschner wires through the fracture site. This is usually the only area where a pin will not interfere with tooth follicles. The pin is connected to a head cast by rubber bands.

For condylar fractures with little displacement, the teeth are kept in occlusion for three or four weeks by a light head cast and plaster splint supporting the chin. A heavy muslin chin strap connected to a head cast by rubber bands may be used. Effects of considerable displacement can be corrected by placing a 2- to 4-mm. thickness of rubber between the upper and lower teeth to act as a fulcrum.

GENERAL MANAGEMENT

Young children can be fed by administering fluids or semifluids with a syringe to which a rubber tube is attached. Nasal-gastric tubes are rarely necessary.

A simple mouth wash to use after feeding is ½ tsp. each of table salt, baking soda, and Borax in a glass of water.

Penicillin should be given prophylactically in all facial fracture cases.

¶ CONTRACEPTION is effected by the use of jelly alone as successfully as when suppositories are employed. R. Finkelstein, M.D., A. Guttmacher, M.D., and R. Goldberg, M.D., of Baltimore find that both religion and parity affect the success of the method, the former through motivation, the latter anatomically. The incidence of unplanned pregnancies among 325 persons adhering to the regimen more than six months was 16.7 per 100 years of exposure. The failures were attributed to both patient and method.

*Am. J. Obst. & Gynec. 63:664-667, 1952.*

¶ PRIMARY DYSMENORRHEA may be relieved by treatment with the dioxolane, Dimethylane. Among 66 patients given 250 mg. of the drug four times a day beginning before or at the onset of menstruation, A. Earl Vivino, M.D., and Gretchen Ritter of Georgetown University, Washington, D.C., find that 18 subjects had excellent results, 37 had good results, and 11 received some relief. No toxic reactions were noted. A woman subsequently treated had slight allergic dermatitis amenable to antihistamines. The therapeutic effects of Dimethylane, identified as 2,2-diisopropyl-4-hydroxymethyl-1,3-dioxolane, resemble the action of the simple monoethers of glycerol, such as mephenesin.

*M. Ann. District of Columbia 22:117-118, 167-168, 1953.*

*Prompt attention to even slight bleeding may avert or modify many serious obstetric difficulties.*

# Bleeding in Pregnancy and Post Partum

WILLIAM A. SCOTT, M.D.
*University of Toronto*

WHEN a woman of child-bearing age has abnormal bleeding, the clinician should think first of pregnancy. The bleeding may be incidental to, or the result of, the condition.

Slight bleeding, warns William A. Scott, M.D., is often a sign of serious hemorrhage to follow but frequently is not given sufficient attention by the physician, especially in the last trimester of pregnancy.

## INCIDENTAL TO PREGNANCY

The hypertrophy and congestion of pregnancy may cause a previously unsuspected *polyp* to bleed slightly. Reluctant to do a pelvic examination because of the possibility of threatened abortion, the physician may keep the patient in bed unnecessarily and not discover the true condition. However, if slight bleeding persists, examination is warranted; a bleeding polyp, when found, can usually be twisted off without danger of abortion.

*Fibroids,* which will occasionally cause bleeding during pregnancy, are almost always submucous. The treatment is conservative, for many patients proceed to term even when the slight bleeding has been frequent or prolonged.

Prolonged bleeding may arise from a *hydatid mole,* difficult to diagnose.

Treatment of *cancer of the cervix,* a rare cause of bleeding during pregnancy, depends on the extent of the growth, the stage of the pregnancy, predilection of the surgeon for radiologic or surgical therapy, and the facilities at hand. Surgical intervention requires specialized skill.

## DUE TO PREGNANCY

The commonest causes of bleeding in early pregnancy are abortion and ectopic pregnancy; in late pregnancy, placenta previa or accidental hemorrhage is usually responsible.

With *threatened abortion,* profuse hemorrhage usually, but not always, requires termination of the pregnancy. Curettage is almost always advisable.

A more difficult problem is prolonged slight bleeding despite treatment. The blood tends to become dark or brown in color and sometimes fetid when the ovum is dead.

Bed rest is the great therapeutic instrument. Although patients often expect hormone or vitamin treatment, these hypodermic medications have not been demonstrated to prevent abortion.

**Bleeding during pregnancy. Postgrad. Med. 13:117-122, 1953.**

The vaginal bleeding usually but not always appearing with *ectopic gestation* may occur at the time of menstruation and so be obscured. Bleeding is usually more scanty and darker than the menses.

The biologic test for pregnancy is of little value in diagnosis. Valuable diagnostic findings are: pain by movement of the cervix and tenderness in one fornix. Sometimes a doughy mass can be palpated in the pouch of Douglas.

Of greatest diagnostic value is posterior colopotomy with a sharp, long-bore needle. This should be done in a hospital so that operation can be performed if necessary.

The possibility of retroversion of the uterus having been eliminated by bimanual palpation, one tenaculum is placed on the posterior lip of the cervix and a second on the posterior wall, about an inch above the first. The vaginal wall is stretched between the two tenacula.

The needle is inserted parallel to the cervix, well into the peritoneal cavity. The syringe piston is pulled back a few centimeters to create a vacuum, and the needle is slowly withdrawn. Even a small amount of blood in the posterior fornix is easily revealed.

*Placenta previa* occasionally is first manifested by profuse bleeding but is usually preceded by minor degrees of bleeding over a period of time. In the last trimester, even slight bleeding requires admission to a hospital; before vaginal examination is started, the operating room facilities should be available in case of need.

Treatment of the parous patient may consist only of rupturing the membranes and permitting the presenting part to press on the low-lying placenta. When bleeding has been profuse, when the placenta previa is complete, and in all primiparas unless the cervix is already dilated, cesarean section should be done.

If the hospital is far away and hemorrhage is copious, the patient should be moved to the nearest hospital at once. On the way, blood, or at least plasma, is given. Vaginal packing is more dangerous than beneficial in this condition.

If the patient is in labor and the cervix slightly dilated, a foot can be brought down to control profuse hemorrhage while the patient is being transported. The danger of bleeding does not always disappear with delivery, even by section.

In *accidental hemorrhage,* sometimes difficult to distinguish from placenta previa, the uterus is usually hard and tender. External bleeding may be profuse or slight; if slight when shock is prominent, the placenta may be completely separated.

If little blood is lost, shock is not present, and the patient is in labor, the membranes are ruptured.

When the bleeding is profuse or evidence of shock is seen, transfusion is started immediately. Cesarean section should not be done in shock cases. Transfusion and sedation are continued until shock is overcome. The patient then goes through normal labor. In the rare case in which bleeding and shock are overcome and labor does not supervene, section may be indicated.

Section is accomplished only for the good of the viable child and when bleeding is slight or moderate. Hysterectomy after section is almost never indicated, even when the uterus is found to be dark and hemorrhagic.

POSTPARTUM HEMORRHAGE

Bleeding after delivery may result from trauma to the genital tract or may arise from the placental site because of failure of uterine contraction.

When the bleeding is from the vagina, the tear is usually easily found. Cervical lacerations may be difficult to distinguish from intrauterine bleeding. If the bleeding is intrauterine, a partial separation of the placenta may be responsible. In such cases, the placenta should be removed and the uterus contracted as soon as possible.

Even after normal delivery, the uterus may relax and fill with blood without external signs of bleeding, and the condition be recognized only from constitutional evidences of hemorrhage.

Most cases of postpartum shock result from hemorrhage.

## Supine Hypotension in Pregnancy

BEN K. HOWARD, M.D., JAMES H. GOODSON, M.D., AND WILLIAM F. MENGERT, M.D.

IF a pregnant woman at or near term lies supine for three to seven minutes, acute hypotension associated with increased pulse rate, augmented femoral venous pressure, pallor, and sweating may occur. This syndrome will appear in about 11% of gravidas and, if accompanied by abdominal pain, may be the cause of unnecessary surgery for supposed ruptured uterus.

Since compression of the vena cava by the flaccid uterus in the supine position is apparently responsible, the syndrome is seen only in late pregnancy and is relieved by change in posture, explain Ben K. Howard, M.D., James H. Goodson, M.D., and William F. Mengert, M.D., of Parkland Hospital and the University of Texas, Dallas. The phenomenon does not develop instantly, since causative factors are the pooling of blood in the lower extremities and exhaustion of blood from the heart and lungs. Deep inspiration creates a vacuum of sufficient intensity to enable some of the blood to return to the chest.

When the woman is supine, as during cesarean section, the femoral venous pressures fall to normal when the pregnant uterus is lifted off the vena cava. During labor, the syndrome is relieved every time the uterus contracts.

Supine hypotensive syndrome in late pregnancy. Obst. & Gynec. 1:371-377, 1953.

*In cases suitable for podalic version, the procedure is easy and safe for both mother and child.*

# Podalic Version and Extraction

KARL M. WILSON, M.D.
*University of Rochester, Rochester, N.Y.*

FOR proper indications and when conditions are safe, podalic version is a valuable means of delivery. In general, podalic version may be done for any complication requiring rapid delivery and in any delivery not handled better with low or mid forceps, states Karl M. Wilson, M.D.

For transverse presentations, if external version cannot be accomplished, podalic version is useful, particularly for multiparas. When the cervix is fully dilated, the membranes are ruptured artificially and version and extraction is done. If the membranes rupture when the cervix is partially dilated—to 6 or 7 cm. in a multiparous woman—manual dilatation is done, then podalic version.

For so-called neglected transverse presentation, version is distinctly inadvisable.

Oblique, persistent brow and face presentations, with the chin posterior, may be managed by podalic version. If the face presents with the chin obliquely or directly posterior, podalic version should not be attempted unless the head can be disengaged easily and the child turned with equal ease. Conversion, that is, simple flexing of the head, is done when possible.

In some cases of vertex presentation, when immediate and rapid delivery is needed, podalic version is the best procedure.

Under favorable conditions, rapid delivery by version may be advantageous if a prolapsed cord or extremity requires immediate action.

Version is preferable to the use of high forceps in the case of impending fetal asphyxia and may be the best procedure in a few cases of ante- or intrapartum hemorrhage.

Podalic version may be employed to effect the birth of a second child in a twin pregnancy if the presentation is transverse or when the head is presenting.

Comments on podalic version and extraction. Postgrad. Med. 13:201-205, 1953.

Podalic version can be safely attempted only if:

- The uterus is not tightly contracted.
- The cervix is fully dilated or easily dilatable.
- The patient does not have pronounced pelvic contraction or cephalopelvic disproportion.
- The presenting part is not so firmly engaged that disengagement from the pelvis will be difficult.
- Sufficient amniotic fluid is left in the uterus to permit easy turning of the child.

Deep anesthesia with complete relaxation is essential. Elbow-length rubber gloves are used. Manual dilatation of the outlet is performed.

When the back is posterior, the upper foot is grasped for traction; the lower foot is grasped if the back is anterior. Both feet may be grasped if easily accessible.

When the head presents, the hand whose palmar surface corresponds to the abdomen of the child is used to grasp the anterior foot for traction. Once the turning is complete, the extraction is the same as for an ordinary breech presentation. The aftercoming head may be delivered by the Mauriceau maneuver or by forceps, and episiotomy is done if desirable.

¶ ECLAMPSIA continues to be a major obstetric hazard. Deaths from eclampsia have not decreased in Philadelphia although the over-all maternal fatality rate was reduced 58% in the period 1940-50—from 2.4 to 1 per 1,000 deliveries. Thus, while eclampsia accounted for only 10.8% of the maternal mortality in 1940, the condition was responsible for 20.8% in 1950, find Elsie R. Carrington, M.D., and J. Robert Willson, M.D., of Temple University, Philadelphia. In the 95 fatal eclampsia cases, only 30 of the infants were born alive; 49 were stillborn and 22 died undelivered. Fully 75% of the maternal fatalities were the result of failure to recognize the importance of slight preeclampsia and to apply proper management. The patient should be hospitalized if the signs of preeclampsia do not reverse or at least stabilize during home or office treatment.
*Am. J. Obst. & Gynec. 65:12-20, 1953.*

¶ MUMPS DURING PREGNANCY is rare but may cause fetal death or deformity. In 1 of 2 cases attended by D. Bowers, M.D., of Vancouver, the disease in the first trimester was followed by expulsion of macerated products of conception and manifestation of meningoencephalitic symptoms. In the other, a normal-appearing fetus was lost. Among the 84 recorded instances, 9 pregnancies ended in fetal deaths and 12 resulted in deformed infants.
*West. J. Surg. 161:72-73, 1953.*

*Infusion of exogenous substances in brain metabolism may be useful for drug-induced delirium or coma.*

# Parenteral Therapy in Drug Intoxication

JONATHAN GOULD, M.B.
*St. Bartholomew's Hospital, London*

MASSIVE parenteral doses of components of the vitamin B complex, ascorbic acid, and glucose may be of distinct help in treatment of delirium or coma caused by the barbiturates, near-alkaloids, or alkaloids and in cases of postoperative psychosis, acute alcoholic psychosis, or delirium tremens.

Direct, moderately rapid injection into a vein or a rapid drip is used. Jonathan Gould, M.B., reports 7 cases in which favorable responses were obtained.

The delirium, coma, and psychosis produced by drugs may be manifestations of disordered brain metabolism, particularly of glucose. The chemical reactions involved in glucose metabolism in the brain are at each stage believed to be subject to the laws of mass action. The important exogenous substances in brain metabolism are oxygen, glucose, ascorbic acid, thiamin hydrochloride, pyridoxine, and nicotinic acid.

A typical prescription to be given by intravenous drip is:

| | |
|---|---|
| Glucose, 10 gm. | 100 cc. |
| Thiamin hydrochloride | 1,000 mg. |
| Nicotinamide | 200 mg. |
| Pyridoxine | 200 mg. |
| Ascorbic acid | 1,500 mg. |
| Distilled water or normal saline to make 250 to 300 cc. | |

The total quantity should be administered in from forty to seventy minutes.

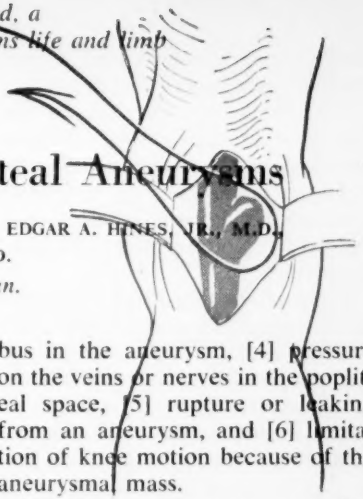
The same amounts may be injected directly intravenously in 30 to 50 cc. of 10% glucose solution. After the initial dose, 2 or more injections, each containing half the above amounts, are given at four- to eight-hour intervals as indicated by signs of recurring sopor, behavior alterations, or clouding of consciousness.

Analeptics, such as nikethamide and picrotoxin, and cerebral stimulants, such as the amphetamines, are usually unnecessary. If used, only small amounts are given, such as 6 to 18 mg. of picrotoxin, 1 to 1.5 gm. of nikethamide, or 15 mg. of amphetamine. The analeptics and cerebral stimulants should be given intravenously after the glucose-vitamin solution and must not be used in cases of delirium.

Large doses of any one of the vitamins alone should not be administered since disturbances in autonomic function have been observed in such circumstances. Although transient anuria has been reported after large doses of thiamin to children, anuria was not noted in any patient treated by the glucose-vitamin regimen.

Treatment of delirium, psychosis, and coma due to drugs. Lancet 264:570-573, 1953.

*Even though uncomplicated, a popliteal aneurysm threatens life and limb and requires surgery.*



# Management of Popliteal Aneurysms

RAY W. GIFFORD, JR., M.D., EDGAR A. HINES, JR., M.D., AND JOSEPH M. JANES, M.D.
*Mayo Clinic, Rochester, Minn.*

SURGICAL treatment designed to obliterate, reconstruct, or extirpate a popliteal aneurysm carries by far the best prognosis. The procedure of choice, in the opinion of Ray W. Gifford, Jr., M.D., Edgar A. Hines, Jr., M.D., and Joseph M. Janes, M.D., is lumbar sympathectomy followed immediately by extirpation of the aneurysm. Only one period of anesthesia should be used.

Arteriosclerosis is the chief cause of popliteal aneurysm and usually roentgenographic evidence of calcium in the wall of the aneurysm or in other arteries is found. Other minor etiologic factors are trauma and syphilis.

The best method for diagnosis is palpation of a tumor behind the knee. If doubt exists, confirmative arteriograms may be made. The aneurysm may vary from 3 to 15 cm. in diameter.

Symptoms directly attributable to popliteal aneurysm are: [1] pain in the popliteal space, [2] intermittent claudication, ischemic neuritis, or both beyond an aneurysm occluded by a thrombus in the leg, [3] gangrene or ischemic ulcers secondary to thrombosis within the aneurysm or emboli from a thrombus in the aneurysm, [4] pressure on the veins or nerves in the popliteal space, [5] rupture or leaking from an aneurysm, and [6] limitation of knee motion because of the aneurysmal mass.

Popliteal aneurysms are frequently complicated by conditions that may lead to functional impairment if not loss of the limb. Over one-half of aneurysms become complicated, the usual source of trouble being acute arterial occlusion with or without gangrene. Other complications are pressure on veins or nerves in the popliteal space and rupture.

Amputation is necessary with many complicated aneurysms. Gangrene secondary to either thrombosis or embolism is by far the commonest reason for the amputation. The first complication of a previously uncomplicated aneurysm often proves fatal to the limb.

No satisfactory nonsurgical treatment exists. Operative measures employed are lumbar sympathectomy and extirpation of the aneurysm, obliterative endoaneurysmorrhaphy, lumbar sympathectomy and obliterative endoaneurysmorrhaphy, extirpation, extirpation with

An analysis and follow-up study of one hundred popliteal aneurysms. Surgery 33:284-293, 1953.

below-knee amputation, and reconstructive endoaneurysmorrhaphy.

The results are excellent when surgery is performed before serious complication. Postoperative complications occur only if the limb circulation is impaired before operation by complications of the aneurysm.

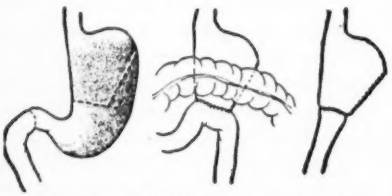
Complete occlusion of a popliteal aneurysm by a thrombus has been referred to as a spontaneous cure. Such a cure is neither safe nor complete, since amputation is often required within a few months. A popliteal aneurysm is a sinister harbinger of sudden catastrophe and neither the patient nor physician should rest easily until the threat to life and limb is surgically extirpated or obliterated.

Doubt exists as to whether anything can be accomplished by operating on a popliteal aneurysm which has been completely occluded by a thrombus. However, operation on a popliteal aneurysm that has caused at least one complication other than thrombosis should be undertaken as a semiemergency, since the prognosis is particularly grave in these cases.

## Technic for Gastric Resection

GUNTHER W. NAGEL, M.D.

ADEQUATE resection for peptic ulcer requires removal of three-fourths to five-sixths of the distal portion of the stomach. A technic for removing such amounts, but retaining enough of the lesser curvature, for gastric motility, is described by Gunther W. Nagel, M.D., of Stanford University, San Francisco.



Methods of subtotal gastric resection

The lesser curvature is freed to about the junction of the upper and middle thirds, and a clamp is placed at right angles to include the desired amount of acid-secreting mucosa for resection. A second clamp is applied at an angle along the greater curvature to remove the desired amount of that part of the stomach. The portion of the stomach included in the second clamp is closed and anastomosis made adjacent to the lesser curvature as either a Billroth I or Billroth II procedure. A short loop is desirable and anastomosis is therefore made beneath the transverse colon, suturing edges of the mesocolic opening to the stomach wall above the line of anastomosis.

Subtotal gastric resection for peptic ulcer. California Med. 78:189-192, 1953.

*Good technic based on sound surgical principles at initial repair of hernia will reduce recurrences.*

# Recurrent Hernias

ERNEST A. RYAN, M.D.
*Shouldice Surgery, Toronto*

THE commonest cause of recurrent inguinal hernia is inadequate primary repair. The greatest incidence is in the first six months.

In a report of 369 consecutive recurrent hernia operations, Ernest A. Ryan, M.D., finds the right inguinal region more often involved and indirect hernia more common than direct or femoral recurrence.

Apparently no special suture material guarantees success, since catgut, silk, wire, and fascia had been used in previous repairs. Nonabsorbable material is probably better than catgut because of the variability in the time of disintegration, particularly if an infection ensues. Silk, while nonabsorbable, has the disadvantage that, if infection occurs, sinuses are formed which do not close unless the offending suture is removed. Wire does not entail either of these handicaps and produces little tissue reaction.

Heavy labor apparently has relatively little to do with hernial recurrence since only slightly over 10% of recurrent hernias develop in persons doing such work. Likewise, the physical traits of height, weight, and waist measurement have little, if any, relationship to hernial recurrences.

The major causes of recurrence as indirect inguinal hernias are as follows:

1] Inadequate removal of the sac—failure to free the neck of the sac completely from the transversalis fascia and to place the stump of the sac entirely, deep to the fascia in the repair

2] Laxity of the internal ring—failure to close the transversalis fascia snug about the cord after removal of the sac

3] Hernias missed—complete failure of the operator to find the sac, sometimes because one of 2 hernias is repaired while the other at the internal ring is overlooked

4] Unrecognized weakness lateral to the internal ring.

Area of conjoined tendon *(circled)* should be searched for weakness.

Recurrent hernias. Surg., Gynec. & Obst. 96:343-354, 1953.

The major causes of recurrences as direct hernias are as follows:

1] Inadequate repair leaving the posterior wall of the inguinal canal still weak

2] Hernia missed because one is repaired and another overlooked or because an inexperienced operator fails to find the sac. Femoral hernias are not infrequently missed even by well-qualified surgeons.

In searching for a possible direct hernia, particular attention must be given to the area in the conjoined tendon just lateral to the edge of the rectus muscle where weakness is not uncommon and may easily be disregarded (see illustration). If the lower edge of the conjoined tendon only is used in the repair, the weakness in this area will be accentuated, predisposing to recurrence.

Hernia repairs in children are more permanent than in adults. However, the lesion sometimes reappears, showing the necessity for care in the initial operative procedure.

Recurrences below the inguinal ligament other than definite femoral hernias are rare. This is evidence against the necessity to use Cooper's ligament rather than Poupart's as the point of fixation below.

Sliding hernial recurrences, indirect, are most commonly associated with a lax internal ring and are not apt to appear until after the age of 58. Any weakness lateral to the internal ring should be repaired if sliding hernial recurrences are to be prevented.

Improvement in repairs of recurrent hernias can be obtained without the use of extraordinary methods. Sound principles of plastic surgery should be combined with a thorough anatomic knowledge of the regions involved.

¶ TREATMENT OF BURNS of all degrees with streptokinase and streptodornase applied locally in a jelly base reduces bacterial infection and toxemia. Healing and ambulation are hastened. Varidase, containing 100,000 units of streptokinase and 25,000 units of streptodornase buffered to a *p*H of 7.5, is mixed just before use and applied to the burn areas, in the method employed by Frances E. Stein, M.D., and Aaron Prigot, M.D., of the Harlem Hospital, New York City, and the late Louis T. Wright, M.D. A covering of sterile gauze is then applied with a bandage on top; for extensively burned regions sheet wadding is used before the final bandage. Adhesive coaptation is employed but not sealing with cement. Dressings are changed every two or three days, when debridement may be performed if necessary. Death from general toxemia and bronchopneumonia occurred in 1 of 6 patients thus treated. In the other 5 cases, moist lesions were drier and less odorous in three days than is usual in such cases, and toxicity was less.

*Harlem Hosp. Bull. 5:134-146, 1953.*

# Medical Forum

*Discussion of articles published in* MODERN MEDICINE *is always welcome. Address all communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

## Common Bile Duct Exploration*

**QUESTION:** When should the common duct be explored?

*Comment invited from*
*David P. Anderson, M.D.*
*C. W. McLaughlin, Jr., M.D.*
*Samuel W. Windham, M.D.*
*Norman W. Thiessen, M.D.*

► TO THE EDITORS: Exploration of the common bile duct should be done during the course of biliary tract surgery when there is even the slightest suspicion of choledochal disease.

Exploratory choledochotomy, per se, properly conducted, adds very little to the difficulty of a correctly performed cholecystectomy. The operative mortality is not increased and the slight increase in operative morbidity is fully justified by the over-all results.

In contradistinction, the failure to detect disease of the common bile duct at the time of the primary biliary tract surgery may be very disconcerting or even disastrous. Residual common duct stones, fibrosis of the ampulla of Vater, chronic pancreatitis, and ductal carcinoma are difficult to diagnose until late, when obstructive jaundice appears. A secondary biliary tract operation, with more dubious indications and technically more difficult, may be forced upon the surgeon or, what is more likely, upon another surgeon because of failure to explore the common duct at the time of the primary operation.

In approximately one-half of our common duct explorations the indications are clear cut, following the classical indications that have been outlined by Dr. Frank Glenn and other prominent surgeons. The yield of positive findings in these explorations is high. In the remaining group choledochotomy is done because of a high index of suspicion, based on a fact or two gleaned from the patient's history, or because of minor changes in the appearance of the bile or the bile ducts at operation. The yield from exploration in this latter group is low, but the detection of common duct stones which would otherwise have been overlooked is rewarding.

We explored the common duct in 32% of 337 operations for benign biliary tract disease during the period 1946-52. The mortality rate (3.7%) for patients subjected to choledochotomy was twice that

*MODERN MEDICINE, Feb. 15, 1953, p. 95.

for the entire group (1.8%) and 8 times the mortality rate (0.45%) for simple cholecystectomy. However, no deaths and no unusual morbidity followed simple exploration of the common duct when no stones were found.

DAVID P. ANDERSON, M.D.
Austin, Minn.

► TO THE EDITORS: We believe that indications for common duct exploration are as follows:

1] Past or present definite clinical jaundice associated with pain

2] Multiple small stones in the gallbladder with a cystic duct somewhat larger than normal

3] A dilated common duct with or without thickening.

We have not been impressed with the importance of palpating stones in the common duct, since this is rarely possible even when multiple stones are present.

In a series of 230 consecutive biliary procedures, associated choledochostomy was performed in 71 instances. Stones were present in the common duct in about 34% of patients.

Routine cholangiograms were made for all patients with choledochostomy on the seventh postoperative day. T tubes used for common duct drainage were usually removed around the twelfth postoperative day, the shortest period of drainage being seven days and the longest fifty-two.

The hospital course of patients subjected to choledochostomy compared favorably with that of patients in whom surgery was limited to the gallbladder. The average hospital stay for the former group was 13.7 days and for the latter, 11 days.

C. W. MC LAUGHLIN, JR., M.D.
Omaha

► TO THE EDITORS: I can find no points on which to disagree with Dr. Frank Glenn regarding exploration of the common bile duct. However, to his list of indications for exploration I should like to add at least one very important reason for this procedure.

In patients with typical histories of gallbladder disease and with physical findings during or between attacks corroborating the symptomatology but with no indication of gallbladder disease on abdominal exploration, the common bile duct should be explored. Positive results of exploration in such situations have occurred frequently enough to warrant this opinion.

It is not enough to open the duct and explore it with instruments, catheters, and so on, and be satisfied with negative exploration when difficulty is encountered in passing instruments into the duodenum. This group of patients should have the distal end of the duct explored through the opened duodenum.

Stricture formation in the region of the ampulla, secondary to either muscle spasm or actual scar formation, produces obstructive symptoms when no stones are present. This can be corrected only by adequate visualization of the sphincter area. Duodenostomy should add

little to postoperative complications if the duodenum is opened longitudinally and adequately closed transversely.

When the common duct is explored I believe it should be drained; I prefer to use a T tube. All standard precautions necessary to properly drain the duct by T tube are taken. Through secondary cholangiography, stones left in the duct at the primary operation can be demonstrated. Diodrast, with the patient in Trendelenburg position, is used to demonstrate the ducts postoperatively.

Stones that have been overlooked should be removed as soon as the surgical wound is clean. I do not remove the common duct T-tube drain as long as the duct contains stones.

I have had poor results with Pribram's and with other related procedures.

The morbidity in gallbladder surgery is extremely high in spite of adequate biliary tract surgery. There is little doubt or argument that one of the most frequent causes of persistent pain following gallbladder surgery is overlooked common duct stones. Postoperative complications are more frequent when common duct exploration is a part of the original procedure; however, that is not an adequate excuse for performing incomplete surgery.

As Dr. Glenn pointed out, I do not believe that exploration should be routine, but I do feel that the more aggressive the surgeon is toward common duct exploration the more intraductal pathology he will find and the fewer patients who will have the same or worse symptoms than before surgery.

SAMUEL W. WINDHAM, M.D.
Dothan, Ala.

► TO THE EDITORS: Dr. Glenn has outlined well the usual indications for exploration of the common duct. However, no statement, especially in medicine, is without exception.

A single indication for exploration of the common duct rarely appears; the surgeon may have several guides. To simplify the rules for the young or the occasional biliary surgeon I list only 2 indications: [1] jaundice, either past or present, and [2] dilated common duct, with or without a dilated cystic duct. I have not relied on the palpation of stones in the common duct as an indication for exploration.

I do not use cholangiography routinely. If the common duct is to be explored, preexploration studies add unnecessarily to the operative time. However, if the gallstones are large and the cystic duct small, cholangiograms of the dilated common duct before removal of the gallbladder may prove the dilatation to be compensatory and without stones, thus saving the patient this procedure.

In my own practice I have found indications for exploring the common duct in one-third of patients; one-third of these yielded "silent" stones.

NORMAN W. THIESSEN, M.D.
Lakewood, Ohio

## Anesthesia for Cesarean Section*

**QUESTION:** What is the best anesthetic for cesarean section?

*Comment invited from*
*Clement S. Dwyer, M.D.*
*Robert E. Ahearn, M.D.*
*John C. Ullery, M.D.*

► TO THE EDITORS: Although trained anesthesiologists may employ a variety of anesthetic agents and methods for cesarean section upon indications generally outlined by Dr. Charles E. Flowers, Jr., the general practitioner or occasional anesthetist in the community hospital should employ safe agents and the methods that are most familiar to him. As a general rule, Vinethene by the open drop technic or nitrous-oxide–oxygen–ether anesthesia by the semiopen, semiclosed, or perhaps the absorption technic is to be recommended in such procedures.

Safe anesthesia during the predelivery period constitutes a major problem since maternal anesthetic death and fetal depression are most liable to occur during this time. One must naturally select agents and methods known to be safe for the mother. Fetal safety involves mainly the avoidance of hypoxia and respiratory depression.

After delivery, any inhalation or intravenous agent of preference may be employed with the possible exception of "deep" ether, since this drug in lower surgical planes promotes uterine relaxation with resultant unnecessary hemorrhage.

Unfortunately, too few surgeons know how to produce adequate local anesthesia for cesarean section. Patients will not tolerate the painful consequences of ineptitude. Dilute solution spinal anesthesia by the single injection or fractional technic obviates ascending intercostal and diaphragmatic paralysis yet does not avoid hypotensive states. Elevation of the legs and administration of oxygen, intravenous fluids, and vasopressors such as Neosynephrine help to combat extreme falls in the patient's blood pressure.

Profound spinal anesthesia is not required. With the single injection technic, 5 to 6 mg. of Pontocaine diluted with 10% dextrose gives adequate analgesia for an abdominal delivery. Pentothal–nitrous-oxide–oxygen may be begun just before or after delivery. Closure of the abdomen is facilitated by the use of added curariform drugs when necessary.

Reverse Trendelenburg position in the presence of hypotension may increase cerebral and medullary hypoxia. Let us not forget that during hypotension, the hypoxic "spinal" patient as well as the "inhalational" individual may aspirate vomitus. I cannot recommend norepinephrine at this time because of its local ischemic effects.

Spinal anesthesia for cesarean section should be administered only by those who are expert in the handling of its untoward reactions.

CLEMENT S. DWYER, M.D.
Bangor, Me.

*MODERN MEDICINE, Mar. 1, 1953, p. 80.

► TO THE EDITORS: The obstetric patient is known to be a poor anesthetic risk, particularly when major surgery is contemplated. Inhalation anesthesia has been unsatisfactory because of the hazards of vomiting and aspiration in the unprepared patient, depression of the infant, and probable increase in bleeding.

Local infiltration anesthesia is feasible only with the most stoic individual and then only when premedication is of a degree that may cause respiratory distress on the part of the child.

Pentothal alone has given me a feeling of haste, especially when complications arise that slow the operation. I worry then about the transmission of the drug to the infant.

Continuous spinal anesthesia requires special technic, equipment, and training that are not always available. The incidence of lumbar puncture headache will be high also.

My choice then for most patients requiring cesarean section is minimal spinal anesthesia, using no more than a single injection of 5 mg. of heavy Pontocaine solution. The only deviation from this might be the use of local infiltration for the patient in hemorrhagic shock.

In some patients the level of anesthesia may be too low. A dilute Pentothal solution by continuous drip may then be used for the relief of discomfort. Premedication with Demerol and scopolamine when the patient is at term may obviate this difficulty without causing depression of the baby. One might better take the chance of a level that is too low than run the risk of too much. Using over 5 mg. of Pontocaine or the equivalent progressively increases the danger of hypotension, respiratory paralysis, vomiting, and nausea. To use 10 mg. or more of Pontocaine in an obstetric patient is extremely dangerous.

The above technic has proved to be generally satisfactory in well over 100 cesareans during the past three years with no "close calls" attributable to anesthesia.

ROBERT E. AHEARN, M.D.
Binghamton, N. Y.

► TO THE EDITORS: The choice of anesthesia or analgesia for cesarean section has challenged obstetricians, anesthesiologists, and physiologists for a great many years. The multiplicity of procedures used, with the many different drugs employed, well attest to the fact that no single method or drug is satisfactory for the relief of pain under the many conditions in which cesarean section is employed.

The ill effects of various drugs and inhalation anesthesia on the unborn child have long been recognized. The marked narcosis of babies delivered by these methods has been one of the highest causes of fetal mortality. Because of these dangers, I believe that some form of local or conduction block anesthesia or analgesia is safest for mother and child. Of these, local infiltration analgesia (anesthesia) is probably the safest. Under certain conditions, however, when ra-

pidity of delivery is essential, local infiltration may further jeopardize the baby. Likewise, not every patient is suitable for this type of anesthesia, and not all surgeons have the necessary tranquility to use it.

Since the introduction of local conduction block analgesia, many patients have been safely delivered vaginally with the use of continuous caudal analgesia and continuous spinal analgesia, with the minimum of complications and mortality.

In 1939, Lemmon conceived the idea of continuous spinal analgesia for general surgery. Its safety has been well demonstrated. The application of this method to cesarean operations followed, since it offered an ideal method of safety and controllability so necessary for this operation.

In 1948, the author, together with Dr. Clifford B. Lull, reported 1,000 cesarean sections using the method of continuous or fractional spinal anesthesia. The operations were performed over the years 1941-48; only 1 maternal death occurred in the series and this was not attributed to anesthesia. The patient died of leukemia twelve days after operation. The uncorrected fetal mortality for this group was 4.7%. None of the fetal deaths was attributed to the continuous spinal analgesia received by the mother at the time of cesarean section.

Continuous spinal analgesia offers the following advantages:

• Safety of administration. Smaller initial doses are given instead of the previous 1 injection, since the most dangerous period of spinal analgesia is within the first thirty minutes after injection. When a small initial dose is used, any untoward toxic symptoms may be minimal and, with the needle in the subarachnoid space, most of the drug can be rapidly withdrawn by removing several cubic centimeters of cerebrospinal fluid.

• Controllability. A very small dose of the drug is given to reach the desired level just above the operative field. Usually this will suffice for the operation. Our initial dosage is 15 mg. of procaine hydrochloride. Additional doses may be given if required. Thus the very minimum of the drug can be used and at all times be well controlled. If the level goes too high or the blood pressure falls below a safe level, a large part of the drug can be withdrawn by aspiration.

• Ease of administration. As the technic consists essentially in making and maintaining a spinal puncture, even an occasional operator can perform it easily.

• Speed. Frequently a rapid cesarean section is imperative. With the short time required for a spinal puncture plus administration of the drug, and the rapid production of analgesia, loss of blood to the mother and fetal mortality can be much decreased.

• Decrease in postoperative complications. In our series postoperative nausea and vomiting were greatly reduced. Abdominal distention was less than with inhalation agents. Patients having continuous spinal analgesia for cesarean section can be fed the same day of operation, which eliminates many abdominal complaints. Urinary re-

tention is no greater and phlebitis is probably less frequent, as are also pulmonary complications.

• Excellent contraction of the uterine musculature with minimal blood loss. Few oxytocics are required after delivery.

• Absence of narcosis to the baby. Resuscitation of the baby is unnecessary as respiration is initiated usually before the baby is completely extracted from the uterus and the infant cries immediately. This is particularly valuable in premature infants born by cesarean section.

• Excellent relaxation of the abdominal wall. The operator performs his task with ease. This is essential in extraperitoneal sections, with which relaxation is imperative.

• No disturbance of previous existing disease in the mother's respiratory, circulatory, or genitourinary system. The drug is low in toxicity, and the minimal dose is employed.

Continuous spinal analgesia may be used in all types of cesarean section. The condition of the patient, however, must be good. With severe hemorrhage from placenta previa or abruptio placentae when the general condition of the patient is poor, use of continuous spinal analgesia would be unwise. Local infiltration analgesia would be the procedure of choice in these instances. In cases of prolonged labor in which cesarean operation becomes necessary, supportive procedures must be instituted before continuous spinal analgesia is administered.

JOHN C. ULLERY, M.D.
Philadelphia

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## Case MM-242

### THE CLUE

ATTENDING M.D: We have a very interesting diagnostic problem on the ward, a 35-year-old man with bizarre neurologic signs. I think he is having a first attack of multiple sclerosis, but the neurologic consultant says, "This is absolutely not multiple sclerosis and even if it is, I won't make the diagnosis in the first attack."

VISITING M.D: Has the patient had any earlier neurologic trouble?

ATTENDING M.D: None whatsoever.

I've asked his mother, father, and brother. That's all the family he has except his wife. I've never met her.

VISITING M.D: If you're tracing it down so carefully, why don't you talk to the wife?

ATTENDING M.D: Well, to tell the truth, she's been out of town all the time he's been in the hospital.

VISITING M.D: How sick do you think he is?

ATTENDING M.D: Seriously ill, maybe critically.

VISITING M.D: Mmm . . . What are the symptoms?

ATTENDING M.D: For two months he has had slowly progressive night insomnia and sleep disturbances, so that he'd fall asleep at work. He is a successful businessman. His memory has been failing. He has anorexia, nervousness, and poor concentration. A week ago he had to quit working, because at that time he had slurring of speech and thickness of tongue, confusion, confabulation, and delusions of persecution. He became combative, even struck his wife.

*(Continued on page 100)*

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**References:** Doyle, J. C.: Urol. & Cutan. Rev. 55:618, 1951 • Schwartz, J.: Am. J. Obst. & Gynec. 63:579, 1952 • Weinstein, B. B. and Weinstein, D.: Mississippi Doctor 29:117, 1951.

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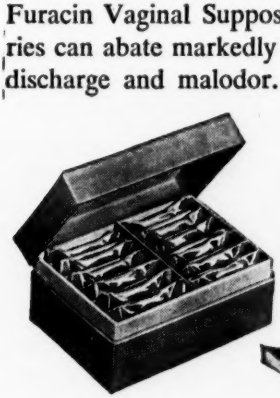
*Literature on request*



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FOOD POISONING

ENTERIC INFECTIONS

PART II

VISITING M.D: *(Examining patient)* The deep tendon reflexes are all absent. Pupils are sluggish. He will obey some commands. He has pronounced nystagmus and an intention tremor. Babinski phenomenon is normal and abdominal reflexes are present.

ATTENDING M.D: Electrocardiograms, urinalysis, complete blood study, cerebrospinal fluid examination, and chest and head roentgenograms are of no help.

VISITING M.D: Was he clearer mentally when you first saw him?

ATTENDING M.D: Yes, but rambling, excitable, seemed almost delirious. I thought at first he was drunk.

VISITING M.D: Blood pressure and pulse?

ATTENDING M.D: 125/70. Pulse 75.

VISITING M.D: I noted some dusky, purplish discoloration of the skin, a sort of acne-like rash on his face.

ATTENDING M.D: I forgot to tell you. He had some headache, dizziness, fatigue, and irritability at the onset but these did not persist.

VISITING M.D: And, I'm sure, some unsteadiness of gait.

PART III

VISITING M.D: The acne-like pustules are without the blackheads of ordinary acne vulgaris. I don't think this is a case of multiple sclerosis. It's progressive, with no clear neurologic picture. The pyramidal tracts are intact. Nystagmus and intention tremor will accompany many disorders. The man's speech is not the scanning cerebellar variety and, as the cerebrospinal fluid is normal, I think we'd better not consider that diagnosis. What could this be that we could treat? There is no effective treatment for multiple sclerosis.

ATTENDING M.D: I wonder if the wife could help us?

VISITING M.D: I was thinking about that too. There are a few more tests that I want done. *(Writes out orders on laboratory slips.)* Now I just wonder—did you look through his personal effects?

ATTENDING M.D: For what? Clues?

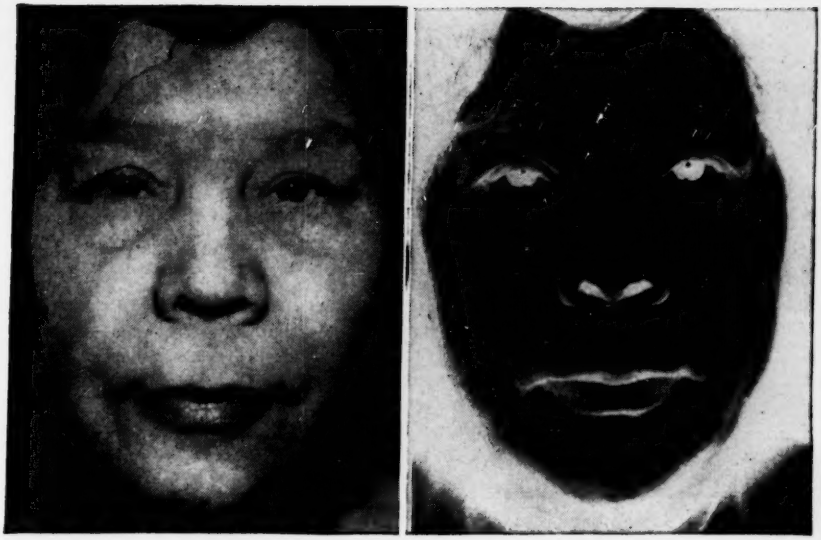
VISITING M.D: Why not?

PART IV

ATTENDING M.D: *(Same day, late evening)* We found nothing except a letter from the Department of Motor Vehicles about his application for a driver's license.

---

*"Whether or not the scar shows will be entirely up to you, Miss Mulvaney."*



## hypothyroidism: positive or negative?

No simple "yes" or "no" diagnosis is possible in many suspected hypothyroids. Current literature stresses that a puzzling sterility, annoying obesity, or refractory menstrual disorder is more often the expression of hypothyroidism than is classic myxedema.

### *The "grays"*

In this "twilight zone" of subclinical hypothyroidism, symptoms are frequently subjective and ill-defined — yet, response to therapy is often dramatic.

### *Improved thyroid therapy*

Whenever thyroid is needed, Proloid provides smoother, more predictable therapy. A true thyroid extract—not just desiccated gland—it is carefully freed of unwanted organic matter. Consistently uniform potency is assured by chemical assay for 0.2% iodine (U.S.P.) and by biological assay in test animals. The patient on Proloid is not subjected to unwitting over- or underdosage manifested by one extreme of jitteriness, tachycardia or nervousness or the other extreme of recurrent hypothyroidism.

### *5 tablet sizes available*

Proloid, which is prescribed in the same dosage as ordinary thyroid, is available in ¼, ½, 1, 1½ and 5 grain tablets and in powder form.

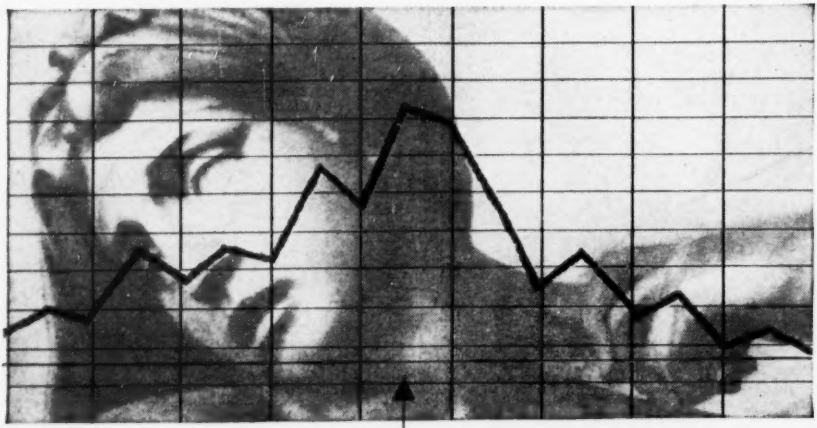
**Proloid®**

*the improved thyroid*

**WARNER-CHILCOTT**

*Laboratories* NEW YORK

*when resistance develops in penicillin therapy . . .*



# Magnamycin®

BRAND OF CARBOMYCIN

**Effective against penicillin-resistant staphylococcal, enterococcal and other streptococcal infections.**

**A new antibiotic agent for selective use in the practice of medicine today.**

**Well-tolerated Magnamycin is supplied in sugar coated tablets of 100 mg., bottles of 25 and 100, and 250 mg., bottles of 16.**

Pfizer CHAS. PFIZER & CO., INC., *Brooklyn 6, N. Y.*

VISITING M.D: Application? Let me see. Yes. It directs him to obtain a letter from Dr. E. E. Jones in Chicago.

ATTENDING M.D: His mother said that his wife was in Chicago.

VISITING M.D: Perhaps I'd better telephone Dr. Jones. *(Puts in long distance call.)* Yes. Hello, Dr. Jones? *(Long inquiry about patient)* Thanks. Good-bye. *(Turning to Attending M.D.)* Well, that settles the issue nicely. You know, my first impression was that he had a poisoning and, because of the rash, I thought of bromide. With his wife away and the history of progressive poisoning, I suspected foul play. Then the question of the driver's license appeal, the doctor's letter, an out-of-town doctor, the wife in Chicago, bromide—it all came together. He has epilepsy. Lost his driver's license. Consulted an out-of-town physician. His wife discovered the letter and went to find out for herself.

ATTENDING M.D: Here's the blood bromide level you ordered: 150 mg., a serious overdosage.

VISITING M.D: Let's continue the isotonic sodium chloride by vein, 1,000 cc. a day, and 4 enteric-coated 15-gr. sodium chloride tablets four times a day. He has almost a bromide psychosis. I would guess he will recover in about two weeks. Prescriptions containing bromide should always carry a "Do Not Refill" reminder. We'll start Dilantin as an anticonvulsant. Better get an electroencephalogram. One rarely sees bromides used for epilepsy these days.

---

## *Life's Weary Moments*

*"After exhaustive studies, Mr. Smith, our reports show your constipation to be more cerebral than intestinal."*

Think of a gag that fits the illustration. For every issue a new gag is published and the author sent $5. The July 1 winner is

*W. I. Proffitt, M.D.*
*Cleveland, Tenn.*

Mail your caption to The Cartoon Editor Caption Contest No. 1 MODERN MEDICINE 84 South 10th St. Minneapolis 3, Minn.

***Dietary Essentials Combined***
***in One Comprehensive Formula***

**Each Tablet 'Mi-Cebrin' contains:**

| | | |
|---|---|---|
| Thiamine Mononitrate | 10 | mg. |
| Riboflavin | 5 | mg. |
| Pyridoxine Hydrochloride | 2 | mg. |
| Pantothenic Acid (as Calcium Pantothenate) | 10 | mg. |
| Nicotinamide | 30 | mg. |
| Vitamin $B_{12}$ (Activity Equivalent) | 3 | mcg. |
| Folic Acid | 0.1 | mg. |
| Ascorbic Acid (as Sodium Ascorbate) | 100 | mg. |
| Alphatocopherol | 5 | mg. |
| Vitamin A Synthetic | 10,000 | U.S.P. units |
| Vitamin D Synthetic | 1,000 | U.S.P. units |

**Also contains:** approximately

| | | |
|---|---|---|
| Iron (as Ferrous Sulfate) | 15 | mg. |
| Copper (as the Sulfate) | 1 | mg. |
| Iodine (as Potassium Iodide) | 0.15 | mg. |
| Cobalt (as the Sulfate) | 0.1 | mg. |
| Boron (as Boric Acid) | 0.1 | mg. |
| Manganese (as the Glycerophosphate) | 1 | mg. |
| Magnesium (as the Oxide) | 5 | mg. |
| Molybdenum (as Ammonium Molybdate) | 0.2 | mg. |
| Potassium (as the Chloride) | 5 | mg. |
| Zinc (as the Chloride) | 1.5 | mg. |

Lilly

**TABLETS**

# 'Mi-Cebrin'

(VITAMIN-MINERAL SUPPLEMENTS, LILLY)

# *Doctor to Doctor*

Think of a gag that fits the illustration. For every issue a new gag is published and the author is sent $5. The July 1 winner is

*H. J. Schultz, M.D.*
*Philadelphia*

Mail your caption to
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No. 2
MODERN MEDICINE
84 South 10th St.
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*"And then she said, 'No, Doctor, I've never had any trouble with the sinuses. I get along with ALL my friends.'"*

# The doctor with the bedside manner

realizes that his great good charm is ultimately dependent on his ability to attain therapeutic response. He's never more self-assured than when prescribing Orthoxine for chronic asthma. He knows Orthoxine provides effective bronchodilation, yet exerts only 1/2000 the pressor effect of epinephrine, and so little CNS stimulation that sedatives are unnecessary.

# Orthoxine*

HYDROCHLORIDE

BRAND OF METHOXYPHENAMINE

Bottles of 100 and 500 tablets.

Orthoxine Hydrochloride is *beta*-(*ortho*-methoxyphenyl)-isopropyl-methylamine hydrochloride—a bronchodilator and antispasmodic made by an exclusive Upjohn process.

*For adults:* ½ to 1 tablet (50 to 100 mg.)
*For children:* half adult dose
*For both:* repeat every 3 to 4 hours as required

*Trademark, Reg. U. S. Pat. Off.

*A product of*

**Upjohn** *Research*

*for medicine... produced with care... designed for health*

THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

# An important new preparation... clinically accepted ...for lowering blood pressure in both benign and malignant hypertension

**(1)** Crumpton, C. W. et al.: Abstract, Society for Pharm. & Exper. Therap., September 8-10, 1952, J. Pharm. & Exper. Therap., 106:378, December, 1952. **(2)** Currens, J. H. et al.: Abstract, Program, American Heart Assn., April 18-19, 1952. **(3)** Meilman, E., and Krayer, O.: Circulation, 6:212, August, 1952. **(4)** Hoobler, S. W. et al.: Ann. Internal Med., 37:465, September, 1952. **(5)** Smirk, F. H., and Chapman, O. W.: Am. Heart J., 43:586, 1952. **(6)** Nash, H. A., and Brooker, R. M.: Abstracts of Papers, 122nd Meeting Am. Chem. Soc. (September, 1952) p. 231. **(7)** Nash, H. A., and Brooker, R. M.: J. Am. Chem. Soc. (in Press).

# PROTOVERATRINE

. . . recently established as one of the most potent and the best tolerated of veratrum derivatives for symptomatic treatment of hypertension

## IS NOW AVAILABLE

Clinical investigations [1-5] show that adequate doses of protoveratrine produce a significant decrease in systolic and diastolic blood pressures . . . frequently with alleviation of such symptoms as headache, insomnia, delirium, dizziness and blurred vision.

When dosage is carefully adjusted to patient tolerance, blood pressure can often be maintained near normal levels indefinitely.[2]

# VERALBA*

[Brand of Protoveratrines A and B... chemically standardized by an original Pitman-Moore assay.[6, 7]]

The individual patient's effective dose can be readily established with Veralba Tablets. Their *chemically-standardized* protoveratrine content is more constant in potency than biologically-assayed preparations . . . permitting the accurate dosage essential for optimal results from protoveratrine therapy.

Veralba is supplied as 0.2 mg. and 0.5 mg. grooved tablets, in bottles of 100.

A "dose-establishment" package of 36 (0.2 mg.) tablets and abstracts of clinical investigations are available on request.

*Trademark

Pharmaceutical and biological chemists

PITMAN-MOORE COMPANY INDIANAPOLIS 6, INDIANA

Division of Allied Laboratories, Inc.

# BASIC SCIENCE *Briefs*

*Experimental Medicine*

## Aspirin for Arthritis

When the inflammatory reactions of formalin-induced arthritis in rats are depressed by aspirin, either the adrenal cortex or some type of cortical secretion is a factor. After injection of irritant into a hind leg, both intact and adrenalectomized animals were given aspirin in doses of 30 mg. per 100 gm. of weight. Drs. Habeeb Bacchus and Azeez Bacchus of George Washington University, Washington, D. C., noted reduction of swelling only in the intact rats.

Federation Proc. 12:7, 1953.

*Physiology*

## Pituitary Extracts and the Pancreas

The weight of the islets of Langerhans in rats is increased by daily injections of crude extract of the pituitary and of growth hormone preparations. B. Kinash and associates of the University of Toronto find that in hypophysectomized animals the augmentation is proportional to the gain in body weight; in intact animals the increase is greater. The pancreatic mass, much reduced after removal of the hypophysis, is only partially restored by glandular therapy; the percentage of islet tissue, greatly increased by the operation, is somewhat diminished by treatment but remains higher than in unoperated animals. The proliferation of the alpha and beta cells may be a compensatory response to increased need for insulin.

Diabetes 2:112-121, 1953.

*Cardiology*

## Venous Pressure

Central venous pressure can be determined peripherally, either during generalized congestion of heart failure or through induced local congestion. With the subject on his right side and arm dependent, a fluid column extends from the pressure gauge to the central venous system. Dr. O. H. Gauer and associates at Wright-Patterson Air Force Base, Ohio, tested 5 subjects during small changes in blood volume. Values corrected for gauge to midsternal distance were recorded from a needle in the antecubital vein by a strain-gauge manometer. When venous tourniquets were placed about the legs or 500 cc. of blood was withdrawn, venous pressure fell 3 to 5 cm. of water and remained low throughout the experiment, although the arterial pressure continued unaltered during this period.

Federation Proc. 12:49, 1953.

## *Our Office Nurse*

Think of a gag that fits the illustration. For every issue a new gag is published and the author is sent $5. The July 1 winner is

*Ronald Reuben, M.D.*
*Los Angeles*

Mail your caption to
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No. 3

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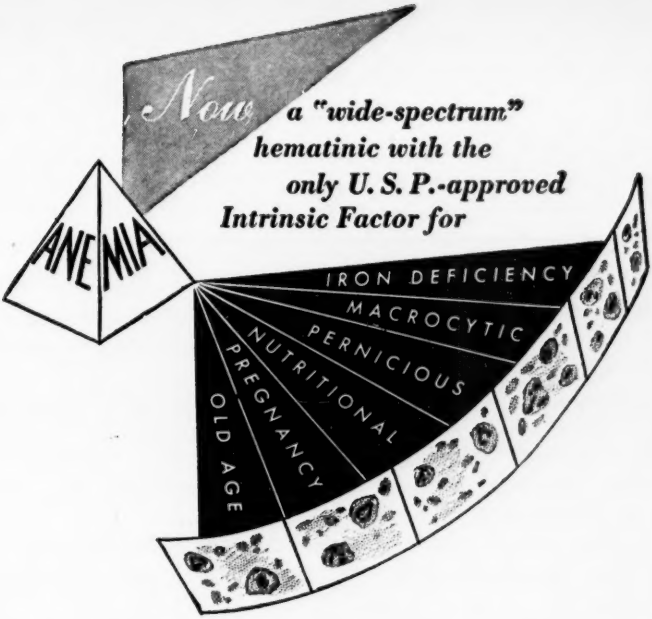
*"The operation was not on her sister Ceil. It was on her cystocele."*




# BINAEMON®

**may be prescribed for any form of anemia—hypochromic, microcytic, macrocytic, normocytic, or pernicious—for it supplies in each easy-to-take tablet five ingredients needed for adequate treatment of any and all of these blood diseases. Binaemon contains Bifacton® (Vitamin $B_{12}$ with Intrinsic Factor Concentrate), 1/9 U.S.P. unit; folic acid. 0.8 mg; vitamin C, 50 mg; ferrous sulfate, 133 mg; and liver concentrate, 100 mg. Because Binaemon supplies intrinsic factor, it provides a safe hematinic, for it assures $B_{12}$ absorption and prevents folic acid from masking the symptoms of incipient pernicious anemia. Prescribe Binaemon for all your anemic patients.**

***Binaemon is available in bottles of 50 tablets.***

**DOSAGE:** For most anemias, 3 Binaemon tablets a day. In severe anemia, including macrocytic anemia of pregnancy, 6 tablets. In pernicious anemia, 9 tablets.

**Organon INC. • ORANGE, N. J.**

PIONEERING

# TRUE HEMATOPOIETIC STIMULANT

## Specific Bone Marrow Stimulation

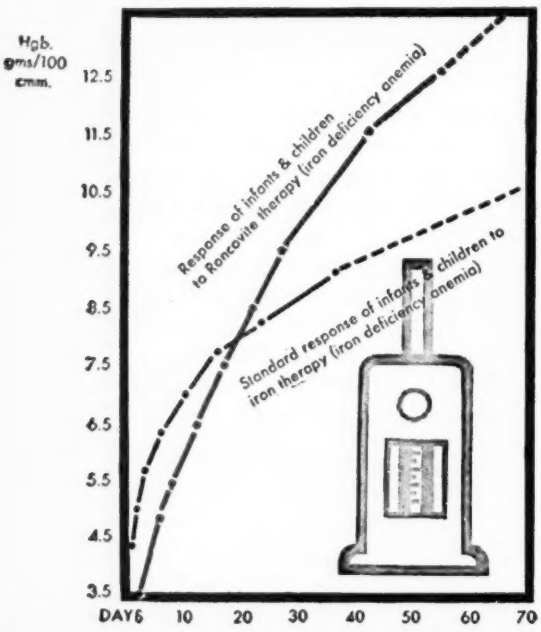
An entirely new approach to the successful treatment of human secondary anemia has been opened up with the introduction of the first true hematopoietic stimulant—Roncovite.

Roncovite offers, for the first time, the specific bone marrow erythropoietic action of cobalt—with adequate iron for the formation of hemoglobin.

In iron deficiency anemia where iron has been the standard treatment, Roncovite produces a faster response, greatly superior erythropoiesis and up to fourfold increases in the utilization of iron.[1, 2]

In the anemia accompanying infection or chronic inflammatory disease, where iron is useless, Roncovite provides—in many cases—a striking and dramatic hematopoietic response.[3, 4, 5, 6, 7]

The above clinical findings mean that Roncovite offers a significant advance in the treatment of all types of "secondary" anemia.




Comparison of the response of hypochromic anemic infants and children to Roncovite and to iron; with Roncovite, iron utilization was so efficient that 58% of the ingested iron was converted to hemoglobin[2]—as compared to the usual average of 15% utilization from ferrous sulfate.—

Standard response chart Josephs, H.: J. Pediat. 49:246 (1931).

# RONCOVITE*

## RONCOVITE—PIONEERED BY LLOYD RESEARCH

**Tablets**—each enteric coated, red tablet contains:

Cobalt chloride (Cobalt as Co....3.7 mg.).....15 mg.
Ferrous sulfate, exsiccated (Iron as Fe....60 mg.).....0.2 Gm.
Average adult dosage—1 tablet after each meal and at bedtime.

*Supplied in bottles of 100 tablets.*

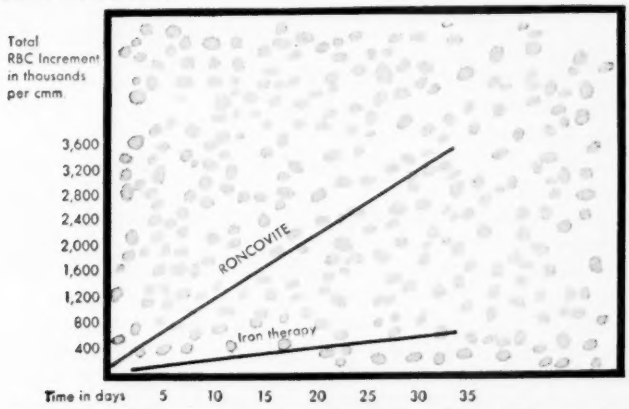
**Drops**—each 0.6 cc. contains:

Cobalt chloride (Cobalt...9.9 mg.).....40 mg.
Ferrous sulfate (Iron...15.1 mg.).....75 mg.
Average dose—0.6 cc. (10 minims) diluted with water, milk, fruit or vegetable juice once daily to infants and children.

*Supplied in bottles of 15 cc. with calibrated dropper.*

1. Wolff, H.: Med. Monatsschr. 5:239 (1951); (2) Rohn, R.J., and Bond, W.H.: to be published; (3) Berk, W., et al: New England J.M. 240:754 (May) 1949: (4) Robinson, J.C., et al: New England J.M. 240:749 (May) 1949; (5) Weissbecker, W., and Maurer, R.: Klin. Woch. 24:855 (1947); (6) Wolff, H., and Barthel, S.: Munch. M. Wschr. 93:467 (1951); (7) Gardner, F.H.: J. Lab. & Clin. M. 41:56 (Jan.) 1953.

*The pioneer cobalt product.




Comparison of the average erythrocyte response of iron-deficiency anemic children to Roncovite[2] and to iron therapy.—Computation—Method of Schiodt: Am. J. Med. Sci. 193:313 (1937).

**LLOYD BROTHERS, Inc.,** Cincinnati 3, Ohio

*In the Interest of Medicine Since 1870*

# *short* REPORTS

*Experimental Medicine*

## Hypertension and Parabiosis

When rats are united in parabiosis, 1 of the 2 partners becomes hypertensive in 40% of cases, and is likely to die of severe cardiovascular lesions in a few weeks. Drs. C. E. Hall and O. Hall of the University of Texas, Galveston, separated 10 of 16 pairs when pressure had remained high for three to eighteen days and averaged 185 mm. of mercury. Normal values returned in fourteen to fifty-one days, with no relation between length or severity of hypertension and recovery time.

Federation Proc. 12:60, 1953.

*Antibiotics*

## Penicillin and Immunity

Partial immunization of mice does not modify the bactericidal activity of penicillin but is supplementary to the action of the drug in curing infection. In partially immune and nonimmune animals with simultaneously induced streptococcal infections, the bactericidal effect of penicillin proceeds at the same rate until drug levels become ineffective, report Dr. Harry Eagle and associates of the National Institutes of Health, Bethesda, Md. However, host defenses are essential for cure if all bacteria are not killed by direct action of penicillin. In the nonimmune mice, bacteria surviving the antibiotic action regularly multiplied and caused fatal infections. In the partially immunized animals, a small fraction of normally curative doses of penicillin reduced the bacterial population to levels easily handled by the host defenses, and the surviving bacteria disappeared in twenty-four to forty-eight hours.

Proc. Soc. Exper. Biol. & Med. 82:201-205, 1953.

*Infections*

## Acute Glomerulonephritis

Different strains of streptococci have varying nephritogenic and rheumatogenic capacities. Therefore, extreme variability from year to year exists in the incidence of acute rheumatic fever and acute glomerulonephritis after streptococcal infections, report Drs. Charles H. Rammelkamp, Jr., and Robert S. Weaver of Western Reserve University, Cleveland, and Warren Air Force Base, Wyo. Epidemics of nephritis have occurred in family units and other population groups. Among 31 nephritic patients observed during a four-year period, type 12 streptococci were associated with 26 attacks, type 4 with 4, and type 25 with 1. Even strains of type 12 differ in nephrogenicity.

J. Clin. Investigation 32:345-358, 1953.

# vulvar itch torments pregnant women

in leukorrhea, itch and burning due to monilial vaginitis...

*nothing works like* **gentia·jel**

only *gentia-jel* offers gentian violet in the new plastic single-dose disposable applicator for the daintiest, easiest way to apply this specific in pregnancy moniliasis.

*gentia-jel* offers rapid, dramatic relief of symptoms...93% clinical cure and improvement rate.

only *gentia-jel* offers gentian violet therapy for safe daily use by the patient throughout entire pregnancy...without messiness and with minimal staining.

**samples** *of gentia-jel... write*

WESTWOOD PHARMACEUTICALS
division of Foster-Milburn Co., Dept. MM
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*Cardiology*

## Suppressor Action of Nupercaine

Ventricular tachycardia associated with acute myocardial infarction in dogs can be suppressed without toxic side reactions by intravenous administration of Nupercaine, if phenobarbital sodium or pentobarbital sodium is administered first. Nupercaine suppressed ectopic impulses in 22 animals with ventricular tachycardia accompanying induced myocardial infarction, report Drs. Abdo Bisteni and A. Sidney Harris of the Louisiana State University, New Orleans. No deaths occurred when the drug was given alone, after morphine, or after the barbiturates. However, vomiting and convulsive movements resulted from use of the drug alone. Morphine administered before Nupercaine eliminated the vomiting but not convulsions. Although both phenobarbital sodium and pentobarbital sodium enhanced the ectopic impulse suppressor action of the cocaine-like drug, only phenobarbital prolonged the action. Slow administration of Nupercaine hydrochloride is necessary since rapid administration causes hypotension and prolonged QRS deflections on electrocardiograms.

Circulation 7:527-532, 1953.


*"There, now, doesn't that feel better?"*

*Serology*

## Serum for Arthritis

Rheumatoid arthritis may be greatly relieved by placental blood serum injected regularly for a few weeks. Dr. Morris Spielberg treated 15 women at Jewish Hospital, Brooklyn, and noted best responses in the premenopausal age group with disease of recent onset. Material is readily prepared. Immediately after birth, the umbilical cord is clamped and cut, the proximal clamp on the cord is released, and placental blood flows freely into tubes of 60-cc. capacity in amounts averaging 40 cc. The cord is not stripped. Blood is refrigerated overnight. Supernatant serum is pooled in a 500-cc. vacuum container and centrifuged at 2,500 rpm for forty-five minutes, then Seitz-filtered and refrigerated. The final product is tested for sterility by culture and serologic test for syphilis. Standard dosage, which may be modified, is 30 cc. injected by vein daily for two weeks, three times weekly for two weeks, twice weekly for three weeks, then weekly for one to three weeks.

Arch. Int. Med. 91:315-324, 1953.

# *a Marked Advance in..*

1. Reich, W. J., et al. (1951), A Recent Advance in Estrogenic Therapy. I. Amer. J. Obst. & Gynec., 62:427, August. 2. Perloff, W. H. (1951), Treatment of the Menopause. II. Amer. J. Obst. & Gynec., 61:670, March. 3. Reich, W. J., et al. (1952), A Recent Advance in Estrogenic Therapy. II. Amer. J. Obst. & Gynec., 64:174, July.

# . . ORAL ESTROGEN THERAPY

## *No Odor or After-Odor*

## *No Taste or Aftertaste*

**NOW,** after years of search . . . a *pure* crystalline salt of the conjugated natural estrogen, estrone.

**HOW** has this tasteless, odorless therapy shown in clinical trial?
"The facility with which dosage can be regulated . . . and the rapidity with which relief can be obtained on minimal medication are commendable."[1]

**SIDE EFFECTS?** From a report on 58 standardized menopausal patients . . .
"Nausea was extremely uncommon, being observed in only . . . one patient on Sulestrex."[2]

**ESTHETIC?**
"The annoying urinary taste and odor, sometimes found in natural conjugated estrogen, is not present."[3]
Make *your* test of SULESTREX—soon.
Available in Tablets and Elixir.

Abbott

→ **SULESTREX®** Piperazine

(Piperazine Estrone Sulfate, Abbott)

3-187

*Steroids*

### Inhibition of Hypertension

Rats made hypertensive by desoxycorticosterone acetate (DCA), unilateral nephrectomy, and sodium sensitization are protected from the hypertensive process by the concurrent administration of the steroid U-0160 (3,21-diacetoxy-5,7,9,-pregnatrien-20-one maleic anhydride adduct). Cardiac hypertrophy is also largely prevented, but the increase of renal mass is augmented, report Dr. Robert O. Stafford and associates of Kalamazoo, Mich. Maleic anhydride alone or a compound resembling U-0160 but without maleic anhydride has no inhibitory effect on hypertension. Action of U-0160 is apparently not through release of 11-oxygenated hormones from the adrenal cortex, because neither adrenal hypertrophy nor thymic involution is produced by the steroid.

Endocrinology 52:292-299, 1953.

*Hormones*

### Diagnosis of Hypothyroidism

Thyrotropic hormone increases thyroid uptake of radioiodine in euthyroidism and pituitary myxedema but not in primary thyroid myxedema. Using the test in 14 doubtful cases of hypothyroidism, Dr. Norman G. Schneeberg and associates of the Philadelphia General Hospital corroborated the final diagnosis in all except 1 instance.

*Hepatology*

### Choline and Protein Deficiency

The fatty metamorphosis caused by choline deficiency is not accompanied by damage in the nonfatty hepatic cells or disturbance in liver function in rats. In contrast, Dr. Dieter Koch-Weser and associates of the Hektoen Institute for Medical Research, Cook County Hospital, and Northwestern University, Chicago, find that a low-protein intake with adequate choline supply produces both kinds of injury. Large supplements of the phospholipid component remove the fat and probably prevent the development of cirrhosis, but do not reverse the pathologic cellular changes.

J. Nutrition 49:443-452, 1953.

*Endocrinology*

### Effects of Neostigmine

Precocious puberty in rats is induced by daily administration of neostigmine. The cholinergic agent alters ovarian activity of immature animals as evidenced by premature openings of the vaginal introitus, reports Dr. C. Frederic Fluhmann of Stanford University, San Francisco. A variable period of estrogen depression follows, which is soon replaced by normal ovarian function. Hypophysectomy and castration prevent the effect of neostigmine, indicating that the action of the drug is mediated through the pituitary gland before reaching the reproductive tract in rats.

West. J. Surg. 61:116-128, 1953.

# SHORT REPORTS FROM ABROAD

## FRANCE

*Therapy of Bronchial Suppuration.* The importance of upper respiratory infection in the pathogenesis of bronchial suppurations is often disregarded. Cure of the infection may eliminate the suppuration and prevent recurrence.

Dr. M. Boiteux stresses that a careful examination should be made for upper respiratory or gingival infection in cases of suppurative bronchitis. The upper respiratory infections in order of importance are: chronic rhinitis, sinusitis, and tonsillitis.

After the infectious focus has been found, a bacteriologic sensitivity test should be made to determine the appropriate antibiotic to use. If indicated, surgical treatment should also be used. A good therapeutic result sometimes depends on treatment not only of the infection but also of associated allergic conditions when present.

2

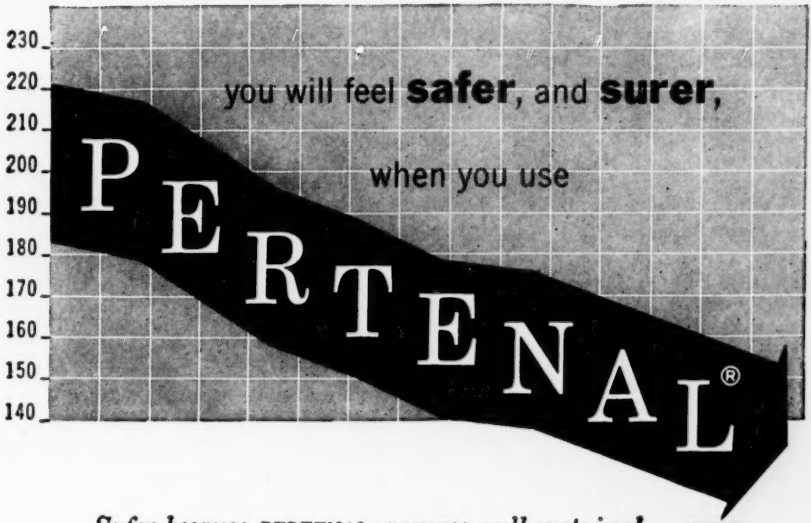
*Assessment of Biliary Function.* The elimination of stercobilin in the feces is significantly increased by the choleretic agent tri-thioparamethoxyphenylpropene in cases of hepatobiliary disease. Assay, which can be performed photometrically from the four-day collected specimen, is therefore of diagnostic value. Drs. R. Cattan, O. Gaudin, and J. Bataille of Paris report that among 4 patients with healthy hepatic function, fecal stercobilin values were sometimes augmented but never more than 60% after dosage with the choleretic agent, while for 16 patients with various hepatic disorders elevations of at least 170% appeared.

3

*Angiopneumography in Preoperative Evaluation.* When pulmonary surgery is contemplated, angiopneumography may be of great preoperative value, especially if cancer of the lungs is likely. The deformities of the arteries and veins caused by a growing tumor can be easily seen on the roentgenogram and correspond to the anatomic lesions found at thoracotomy. When the angiographic findings show compression or amputation of the main vessels, surgery should probably not be attempted.

Special attention should be given to the superior vena cava, explains Dr. J.-C. Sournia of the University of Lyon. This is often compressed in tumors about the hilus. With proper technic, deformities in small vessels can be seen, indicating the location of tumors of the lung periphery.

# in **hypertension**




*Safer because* PERTENAL *assures well-sustained lowering of pressure, and prompt control of distressing symptoms, without fear of serious toxic reaction.*

*Surer because* PERTENAL *is a comprehensive approach to the problem.*


PERTENAL combines:

1. The DUAL HYPOTENSIVE ACTION of veratrum viride and mannitol hexanitrate. Mannitol hexanitrate reduces pressure promptly, permitting the veratrum to take effect at a lower pressure level and with lower dosage ... thus reducing possibility of toxic reaction.
2. The G.I. ANTISPASMODIC ACTION of homatropine methylbromide to relax g.i. tension and to prevent or decrease any veratrum nausea.
3. The SEDATIVE ACTION of phenobarbital to allay anxiety and decrease mental tension.

*For better and safer control of the many symptoms and the many factors which may aggravate or intensify* HYPERTENSION *specify* PERTENAL.

**detailed information and samples to physicians on request**

CROOKES LABORATORIES INC Crookes MINEOLA NEW YORK

*Therapeutic Preparations for the Medical Profession*

The technic consists of fast intravenous injection of 60 to 80 cc. of the contrast medium, after preliminary intradermal testing for reactions. Angiopneumographic studies are also useful in the functional evaluation of the pulmonary circulation, but are of relative value only.

4

*Thrombosis Prophylaxis.* Heparin may be given intradermally to prevent or treat thrombosis. The clotting time curves compare favorably with those obtained by depot administration or repeated intravenous injections, and hematomas and discomfort at the site of injection are less likely to occur than when the intramuscular route is employed, observes Dr. Cl. Olivier of Paris.

Results seem to be particularly encouraging in prophylaxis.

5

*Treatment of Chronic Otitis.* Topical application of a solution containing an antibiotic and hyaluronidase is effective in cases of resistant chronic middle-ear infections, find Drs. Robert Bourgeois, Gordon Tarlé, and Yves Tarlé of the Hospital of Paris. The choice of the antibiotic depends on in vitro sensitivity tests of the bacterial flora of the ear.

After thorough irrigation, a concentrated solution of the antibiotic mixed with about 125 viscosity units of hyaluronidase, a total volume of 3 to 4 cc., is instilled in the affected ear twice daily for approximately a week.

Results are best for children and are less favorable for adults or in cases with foci of osteitis.

## ARGENTINA

*Banthine for Ulcerative Colitis.* Ganglion-blocking agents like tetraethylammonium and Banthine reduce intestinal motility and diminish secretory activity. Because of this action, Dr. Julio C. Arias of the Spanish Hospital of Rosario believes that patients with ulcerative colitis may be successfully treated by Banthine and tetraethylammonium.

Intramuscular injections are first given of tetraethylammonium; later Banthine is used. Dosage is rapidly increased, then gradually tapered off, if the treatment proves successful. Great subjective and objective improvement was achieved in 3 of 4 cases. The fourth patient also showed definite improvement by proctoscopic examination but continued to have frequent blood-tinged stools.

## GERMANY

*Cerebral Angiography.* Vertebral artery angiograms are of diagnostic value in diseases of the supra- and infratentorial region. When such films are studied with angiograms made by way of the carotid artery, a complete evaluation of the cerebral arterial system is possible, observes Dr. Th. Tiwisina of the University of Münster.

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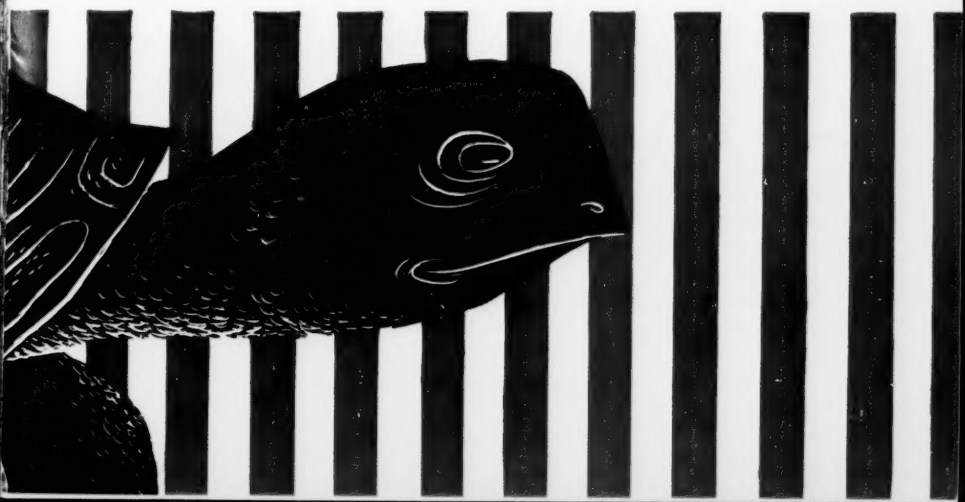

The roentgenograms are indicative not only of circulatory disturbances and malformations but also of tumors in the occipital and cerebral regions. The arteriogram is made in 3 planes—fronto-occipital, lateral, and axial. The artery has to be exposed or cannulated, or both, to avoid extravascular injection of the opaque medium when the position of the head changes.

2

*Iron Deficiency in Polycythemia.* The polycythemic patient has symptoms of iron deficiency largely because of the increased demand for iron, believe Drs. Hans Goldeck and Dietrich Remy of the University of Hamburg-Eppendorf, who report sideropenia and accelerated iron absorption in 4 cases of polycythemia. The color index is also lowered, indicating that more red cells form than can obtain iron.

The iron deficiency increases if therapy is attempted by repeated phlebotomies. The administration of $P^{32}$ often improves the sideropenia by decreasing the excessive erythropoiesis. However, even in these cases, the deficiency may persist so that iron therapy is necessary.

3

*Denervation in Arthrosis Deformans.* Conservative treatment of arthrosis deformans is not always satisfactory. Extensive surgical procedures are not well tolerated by elderly patients.

Denervation of the hip-joint capsule offers relief of pain and improves the blood supply so that function is bettered. The technic is relatively simple, observes Dr. W. Lembcke of the University of Rostock.

By an anterior approach, the pectineal fascia is cut open and the obturator nerve is put on stretch so that exposure and sectioning of the few nerve branches to the capsule are facilitated.

After the anterior skin incision is closed the patient is turned to a prone position and another incision is made from the superoposterior iliac spine to the greater trochanter. The gluteus maximus muscle is bluntly separated, the gluteus medius and minimus are retracted, and the piriformis is exposed.

The sciatic nerve is then put on tension in the medioposterior direction; the branches to the hip-joint capsule are identified and cut. The capsule is bluntly separated from the surrounding tissue, assuring complete denervation.

Postoperative recovery is uneventful except for transitory difficulty in using the extremity. A few walking exercises are usually enough to restore normal gait.

# look to Neurology

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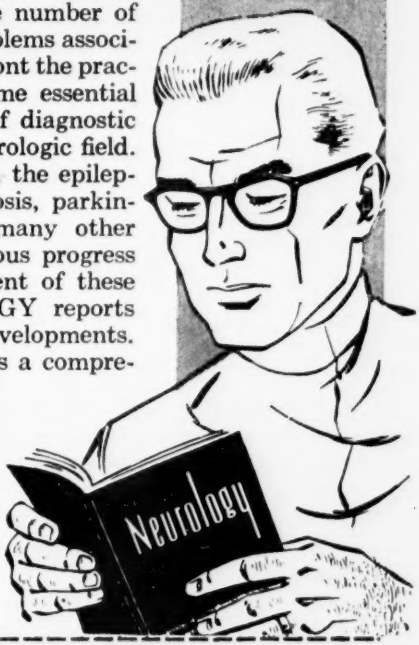
Just 2 years ago, an estimated 2,000,000 patients received treatment annually for nervous or mental disfunction. Today, the number of cases has quadrupled. Medical problems associated with the nervous system confront the practitioner so frequently it has become essential for *every* doctor to keep abreast of diagnostic procedures and therapy in the neurologic field.

Intensive study of poliomyelitis, the epilepsies, brain injuries, multiple sclerosis, parkinsonism, myasthenia gravis and many other disorders has resulted in tremendous progress in the understanding and treatment of these neurologic problems. NEUROLOGY reports monthly on all important new developments. In addition, a regular section gives a comprehensive picture of the symptomatology of specific neurologic disorders together with a critical evaluation of current treatment. Here is practical information on neurology.

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## LATE REPORTS *from Medical Centers*

★ WASHINGTON UNIVERSITY, St. Louis--Various types of cancer may contain chemicals not found in healthy tissue, and vice versa. A pyridine-like compound that occurs naturally in skin of animals and man disappears just as cancer develops, observe Drs. Christopher Carruthers and Valentina Suntzeff. On the other hand, nicotinamide was noted in 5 different tumors as well as brain and spleen, but not in 6 normal tissues.

★ UNIVERSITY OF CALIFORNIA, Berkeley--A pituitary hormone apparently distinct from ACTH and other known secretions stimulates bone marrow to increase production of red blood cells. When available in sufficient quantities, the erythropoietic factor may be helpful in controlling anemia, believe Dr. Donald Van Dyke and associates.

★ STATE UNIVERSITY OF IOWA, Iowa City--Predisposition to certain kinds of cancer may be caused during pregnancy by hormone production of the mother's ovaries, adrenals, or placenta. In frog larvae, the type of embryonic tissue affected by estrogen normally develops into such organs as sex glands, adrenals, and urinary tubules. Hormone stimulation may change relative differentiation and influence or produce cancer in all these organs. Dr. Emil Witschi greatly altered hormone secretion of offspring by giving gestating animals estrogen. Male tadpoles were feminized by moderate doses, but in females given large amounts follicular cells were repressed and masculinizing cells of ovaries were stimulated to the point of sex reversal, while the adrenal glands were enlarged tenfold.

★ UNIVERSITY OF VIRGINIA, Charlottesville--Migraine and headache due to high blood pressure or renal disorder are relieved by an ion exchange resin that reduces edema. Meniere's syndrome and epilepsy may also be alleviated. Dr. Walter O. Klingman employs the potassium and ammonium form of a cross-linked polyacrylic cation exchanger, also effective in some forms of heart disease and cirrhosis of the liver.

★ WASHINGTON UNIVERSITY, St. Louis--Normal cells are covered with a thin layer of ribonucleoprotein that apparently helps transport nutrient chemicals to the interior. The surface has numerous projections that increase surface area tenfold. Fast-growing cells, including cancer, lack calcium, an element characteristic of age. Dr. Albert I. Lansing examined structure of clam eggs and other tissues under the electron microscope. When the surface layer was broken up with ribonuclease, neither calcium nor strontium was absorbed.

★ COLUMBIA UNIVERSITY, New York City--Vitamin $B_{12}$ accelerates wound healing in rats, especially in early stages, probably by taking part in protein synthesis. With a fair to good supply of dietary protein, tensile strength of wounds was increased at least by the third postoperative day and notably by the sixth. Dr. Charles W. Findlay, Jr., produced as good results with treatment after surgery as when preoperative doses were also given. Healing did not improve in animals on a low-protein diet.

★ LOUISIANA STATE UNIVERSITY, New Orleans--Tuberculosis of all types can be diagnosed in a few days by inoculation of fertile chicken eggs with infected material, though other methods require two to ten weeks. Dr. John Buddingh and J. W. Brueck inject sputum, tissue, or other specimen into the yolk sac on the sixth to eighth day of incubation and examine the embryo for bacilli four to six days later.

# CURRENT
# BOOKS *and* PAMPHLETS

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## Medicine

ESSENTIALS OF MEDICAL DIAGNOSIS *by* Lord Thomas J. Horder *and* A. E. Gow. 2d ed. 462 pp. Cassell & Co., London. 22*s.* 6*d.*; Williams & Wilkins Co., Baltimore. $6

INFECTIOUS MONONUCLEOSIS *by* Sidney Leibowitz. 163 pp. Grune & Stratton, New York City. $4.75

BASEDOW'S DISEASE *by* H. Sattler; *translated by* John F. Marchand *and* Grace W. Marchand. 605 pp. Grune & Stratton, New York City. $10

## Gynecology & Obstetrics

HANDBOOK OF GYNAECOLOGICAL DIAGNOSIS *by* Walter Neuweiler; *translated by* Dr. Paul Ederer. 448 pp., ill. William Heinemann, London. 8*s.*; Grune & Stratton, New York City. $12

MODERN PRACTICE OF OBSTETRICS *by* D. M. Stern *and* C. W. F. Burnett. 248 pp., ill. Baillière, Tindall & Cox, London. 35*s.*

GAS AND AIR ANALGESIA IN MIDWIFERY *by* George H. T. Stovin. 2d ed. 78 pp., ill. Staples House, London. 10*s.* 6*d.*; New York City. $2.25

## Neurology

PAIN SYNDROMES; DIAGNOSIS AND TREATMENT *by* Bernard Judovich *and* William Bates. 4th ed. 440 pp., ill. F. A. Davis Co., Philadelphia. $7.50

PRATIQUE NEUROLOGIQUE *by* M. Riser. 2 vols. 1,427 pp. Masson & Co., Paris. 10,000 fr.

## Surgery

OPERATING ROOM TECHNIC, ST. MARY'S HOSPITAL, ROCHESTER, MINNESOTA. 4th ed. 345 pp., ill. W. B. Saunders Co., Philadelphia. $6.50

THE SURGERY OF PANCREATIC NEOPLASMS *by* Rodney Smith. 168 pp., ill. E. & S. Livingstone, Edinburgh. 35*s.*

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THE 1952 YEAR BOOK OF THE EYE, EAR, NOSE AND THROAT *edited by* Derrick Vail *and* John R. Lindsay. 455 pp., ill. Year Book Publishers, Chicago. $6

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UNIPOLAR LEAD ELECTROCARDIOGRAPHY AND VECTORCARDIOGRAPHY *by* Emanuel Goldberger. 3d ed. 601 pp., ill. Lea & Febiger Co., Philadelphia. $10

PATHOLOGY OF THE HEART *edited by* S. E. Gould. 1,023 pp., ill. Charles C Thomas, Springfield, Ill. $25.50

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ADOLESCENCE AND YOUTH: THE PROCESS OF MATURING *by* Paul Henry Landis. 2d ed. 461 pp., ill. McGraw-Hill Book Co., New York City. $5

RESIDENTIAL TREATMENT OF EMOTIONALLY DISTURBED CHILDREN: A DESCRIPTIVE STUDY *by* Joseph H. Reid *and* Helen R. Hagan. 313 pp. Child Welfare League of America, New York City. $3.50

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THE DREAM, MIRROR OF CONSCIENCE *by* Werner Wolff. 348 pp., ill. Grune & Stratton, New York City. $8.50

## Rehabilitation

PHYSICAL REHABILITATION FOR DAILY LIVING *by* Edith Buchwald *et al.* 183 pp., ill. McGraw-Hill Book Co., New York City. $7.50

PHYSICAL CAPACITIES AND JOB PLACEMENT *by* Bert Hanman. 167 pp., ill. Eijnar Munksgaard, Copenhagen. 30 kr.

DIE ÄRZTLICHE BEURTEILUNG BESCHÄDIGTER *by* G. von Schoeneberg *et al.* 352 pp. Dietrich Steinkopff, Darmstadt. 20 DM.

## Bacteriology

DIAGNOSTIC BACTERIOLOGY: A TEXTBOOK FOR THE ISOLATION AND IDENTIFICATION OF PATHOGENIC BACTERIA *by* Isabelle Gilbert Schaub *and* M. Kathleen Foley. 4th ed. 356 pp., ill. C. V. Mosby Co., St. Louis. $4.50

ZINSSER'S TEXTBOOK OF BACTERIOLOGY *edited by* David T. Smith *et al.* 10th ed. 1,012 pp., ill. Appleton-Century-Crofts, New York City. $11

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**References:**
1. Slinger, W. N., and Hubbard, D. M. (1951), Arch. Dermat. & Syph., 64:41, July.
2. Slepyan, A. H. (1952), Ibid., 65:228, February.
3. Ruch, D. M. (1951), Communication to Abbott Laboratories.

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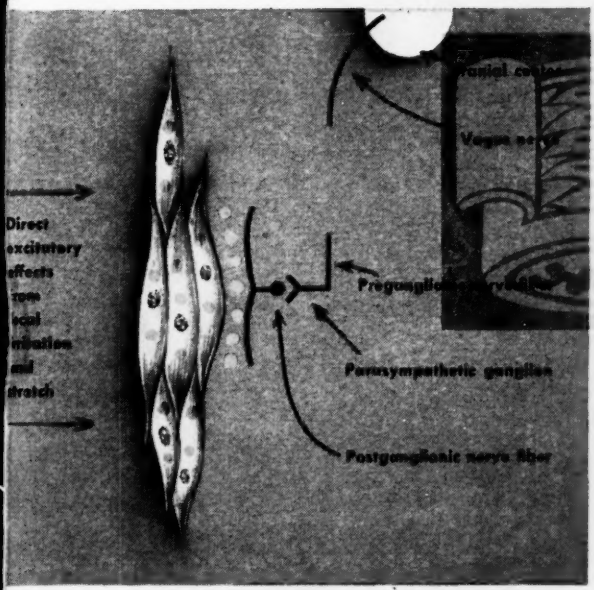


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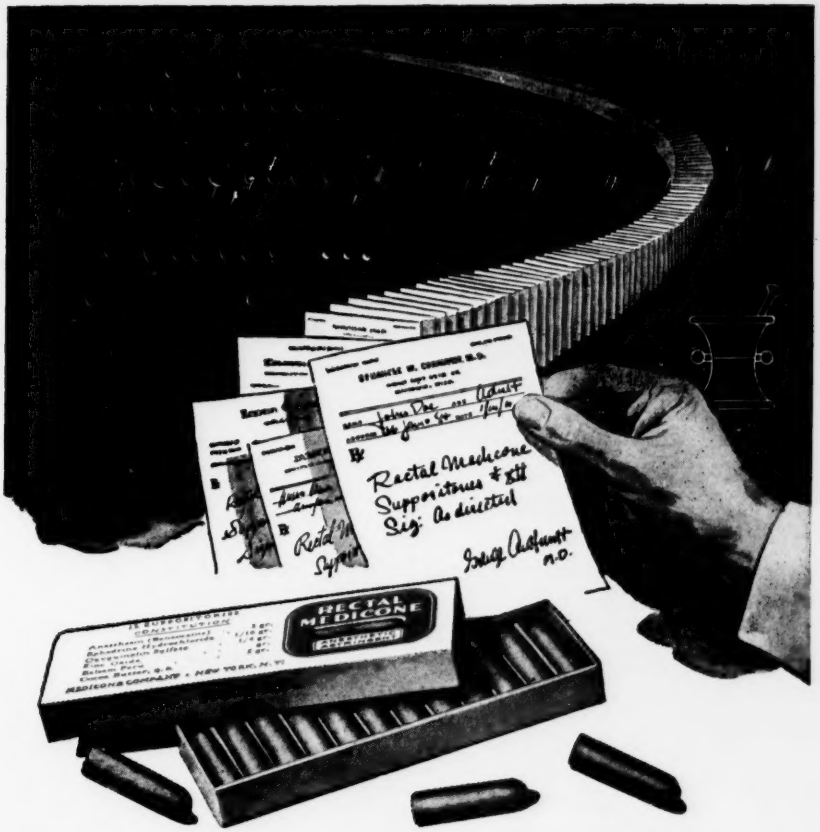


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